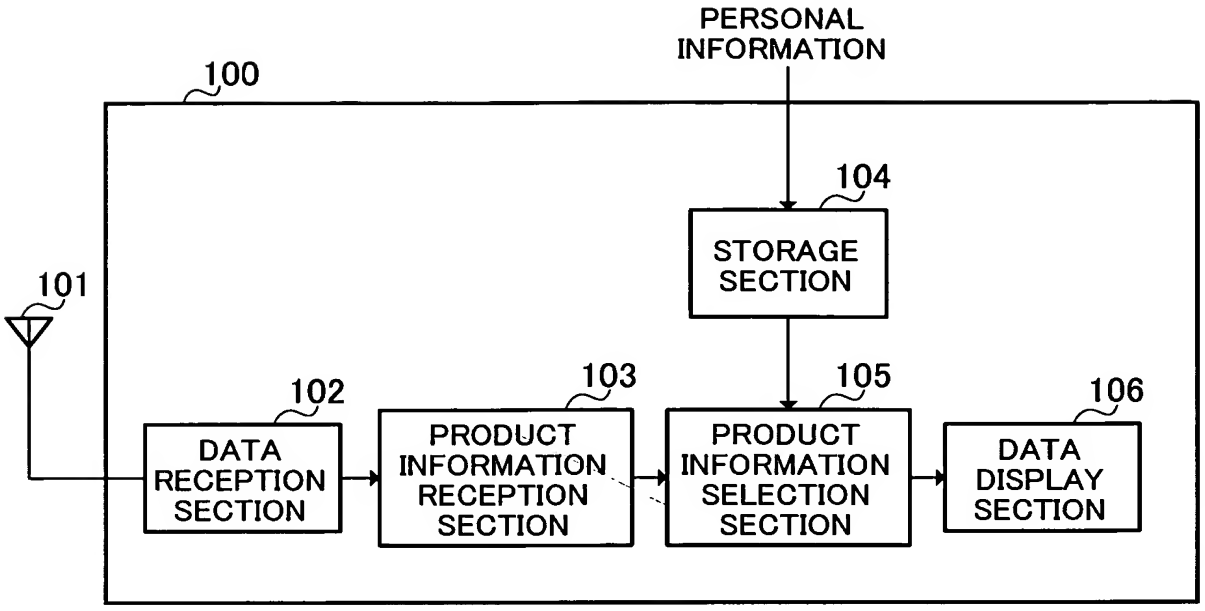

PERSONAL INFORMATION
100
104
STORAGE SECTION
101
102
103
105
106
DATA RECEPTION SECTION
PRODUCT INFORMATION RECEPTION SECTION
PRODUCT INFORMATION SELECTION SECTION
DATA DISPLAY SECTION

FIG.1

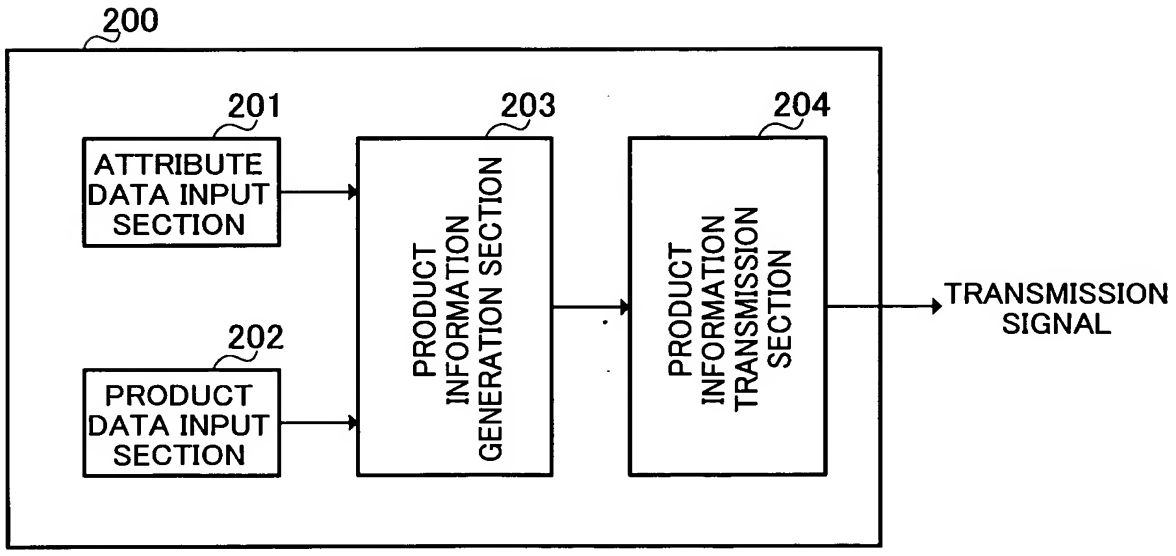

200
201
203
204
ATTRIBUTE DATA INPUT SECTION
202
PRODUCT DATA INPUT SECTION
PRODUCT INFORMATION GENERATION SECTION
PRODUCT INFORMATION TRANSMISSION SECTION
TRANSMISSION SIGNAL

FIG.2

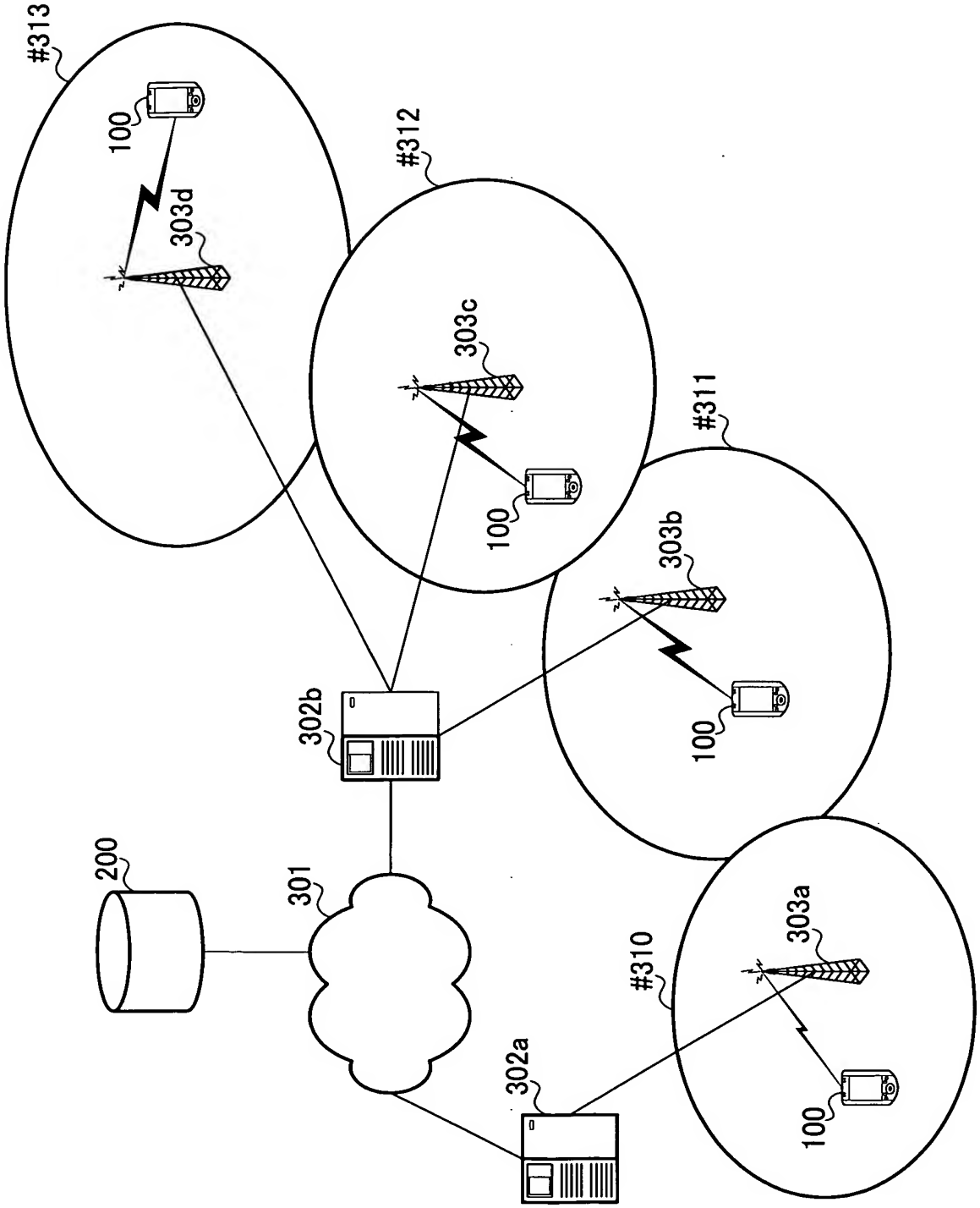

#313
100
303d
#312
303c
100
#311
303b
100
302b
200
301
#310
303a
100
302a

FIG.3

```
<?xml version="1.0" encoding="Shift_JIS" ?>
<ITEM>
  <NAME>NOTEBOOK PERSONAL COMPUTER</NAME>
  <MAKER>NN COMPUTER</MAKER>
  <TYPE>NN-2400</TYPE>
  <PRICE>149800</PRICE>
  <URL>http://store.jp/electronics/?type=nn-2400&p=149800</URL>
  <META AGE=20-50 GENRE=electronics PRESENT=10></META>
</ITEM>
<ITEM>
  <NAME>DIGITAL CAMERA</NAME>
  <MAKER>ABC CAMERA</MAKER>
  <TYPE>X-DG-300</TYPE>
  <PRICE>29800</PRICE>
  <META AGE=20-40 SEX=M GENRE=electronics PRESENT=70></META>
  <URL>http://store.jp/electronics/?type=x-dg-300&p=29800</URL>
</ITEM>
<ITEM>
  <NAME>ROSE</NAME>
  <MAKER>FLOWER SHOP A</MAKER>
  <TYPE>rose</TYPE>
  <PRICE>4980</PRICE>
  <META AGE=20-50 SEX=F GENRE=flower PRESENT=90></META>
  <URL>http://store.jp/flower/?type=rose?p=4980</URL>
</ITEM>
<ITEM>
  <NAME>MASSAGING TOOL</NAME>
  <MAKER>M ELECTRIC WORKS</MAKER>
  <TYPE>MM-3200</TYPE>
  <PRICE>29800</PRICE>
  <URL>http://store.jp/electronics/?type=nn-3200&p=29800</URL>
  <META AGE=50-60 GENRE=electronics PRESENT=70></META>
</ITEM>
<ITEM>
  <NAME>PRINTER</NAME>
  <MAKER>C PRINTER MANUFACTURING</MAKER>
  <TYPE>PR-800</TYPE>
  <PRICE>12800</PRICE>
  <URL>http://store.jp/electronics/?type=pr-800&p=12800</URL>
  <META AGE=20-40 SEX=M GENRE=electronics PRESENT=10></META>
</ITEM>
</xml>
```

#401 #410 #402 #411 #403 #412 #404 #413 #405 #414

FIG.4

FIG.5A

FIG.5B

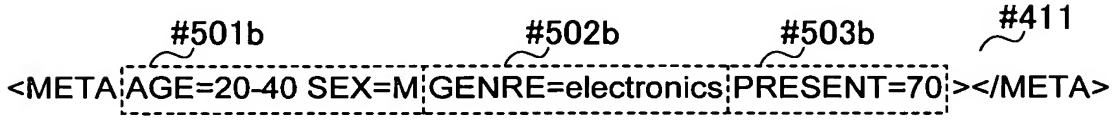


FIG.5C

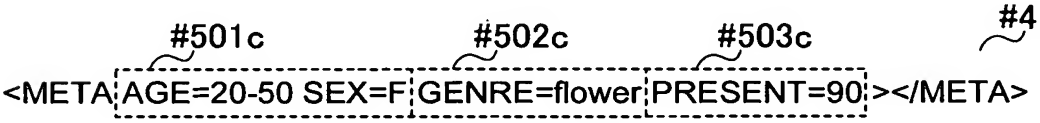
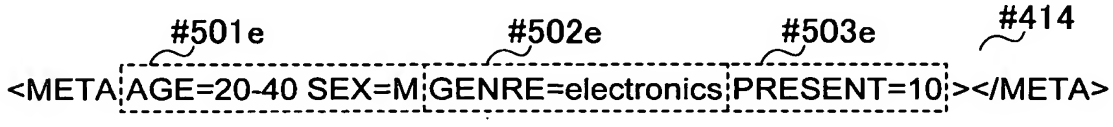


FIG.5D

FIG.5E



NAME	TELEPHONE NUMBER	SEX	AGE	BIRTHDAY	E-mail	HOBBY/ INTEREST	
M TARO	090-XXXX-XXXX	M	30	19740503	aa@example.com	GOLF	
M ELECTRIC	045-XXX-XXXX	-	-	-	————	———	
JHON	090-XXXX-YYYY	M	45	19590310	john@xxx.email.com	FISHING	
HANAKO	090-XXXX-ZZZZ	F	23	19810917	hanako@xxx.email.com	MUSIC	#601
DOMINIC	090-XXXX-AAAA	M	54	19500920	dom@xxx.email.com.fr	READING	#602

FIG.6

<HTML>
<BODY>
<H1>MOBILE SHOPPING 9/15</H1>

#701

<UL>RECOMMENDED FOR HANAKO ROSE
<LI>4980 YEN
</UL>

#702

<UL>
<LI> RECOMMENDED FOR DOMINICMASSAGING TOOL MM-3200
<LI>M ELECTRIC WORKS
<LI> MM-3200
<LI>29800 YEN
</UL>
</BODY>
</HTML>

FIG.7

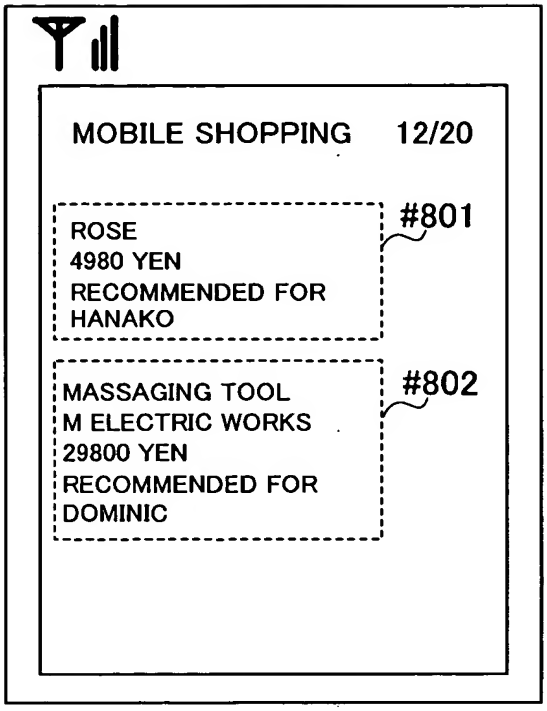

MOBILE SHOPPING 12/20
ROSE
4980 YEN
RECOMMENDED FOR
HANAKO
#801
MASSAGING TOOL
M ELECTRIC WORKS
29800 YEN
RECOMMENDED FOR
DOMINIC
#802

FIG.8

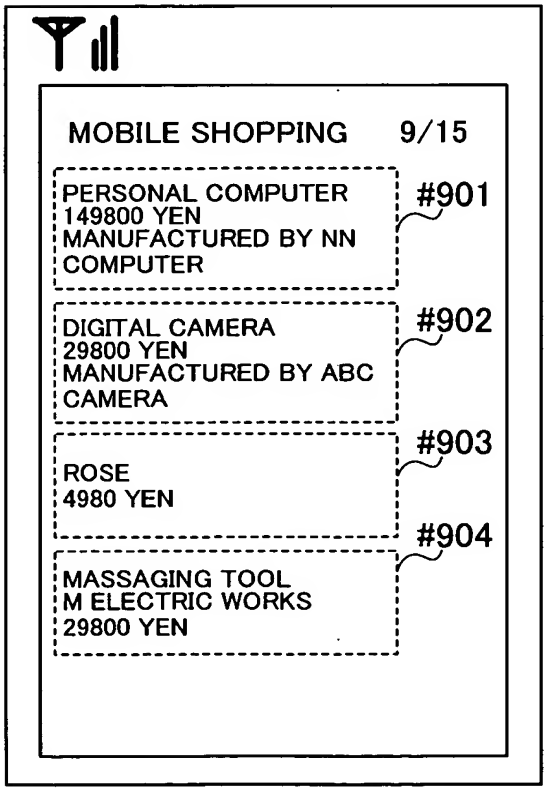

MOBILE SHOPPING 9/15
PERSONAL COMPUTER
149800 YEN
MANUFACTURED BY NN
COMPUTER
#901
DIGITAL CAMERA
29800 YEN
MANUFACTURED BY ABC
CAMERA
#902
ROSE
4980 YEN
#903
MASSAGING TOOL
M ELECTRIC WORKS
29800 YEN
#904

FIG.9

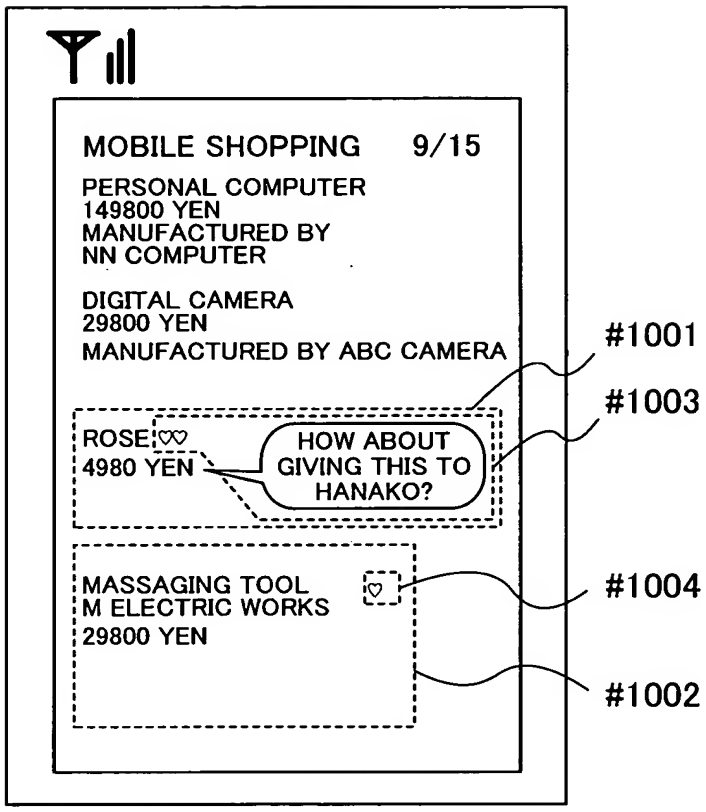

MOBILE SHOPPING 9/15
PERSONAL COMPUTER
149800 YEN
MANUFACTURED BY
NN COMPUTER
DIGITAL CAMERA
29800 YEN
MANUFACTURED BY ABC CAMERA
ROSE
4980 YEN
HOW ABOUT GIVING THIS TO HANAKO?
MASSAGING TOOL
M ELECTRIC WORKS
29800 YEN
#1001
#1003
#1004
#1002

FIG.10

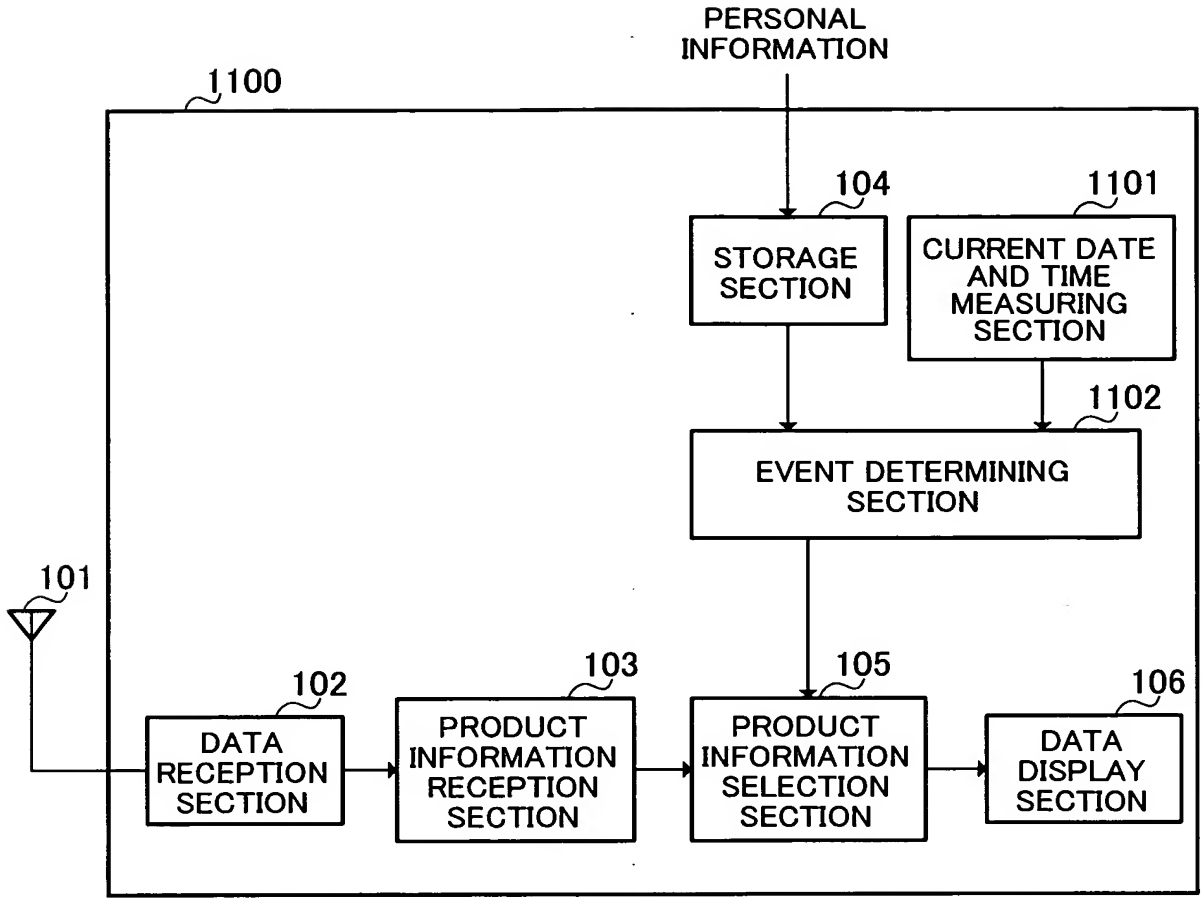

PERSONAL INFORMATION
1100
104
1101
STORAGE SECTION
CURRENT DATE AND TIME MEASURING SECTION
1102
EVENT DETERMINING SECTION
101
102
103
105
106
DATA RECEPTION SECTION
PRODUCT INFORMATION RECEPTION SECTION
PRODUCT INFORMATION SELECTION SECTION
DATA DISPLAY SECTION

FIG.11

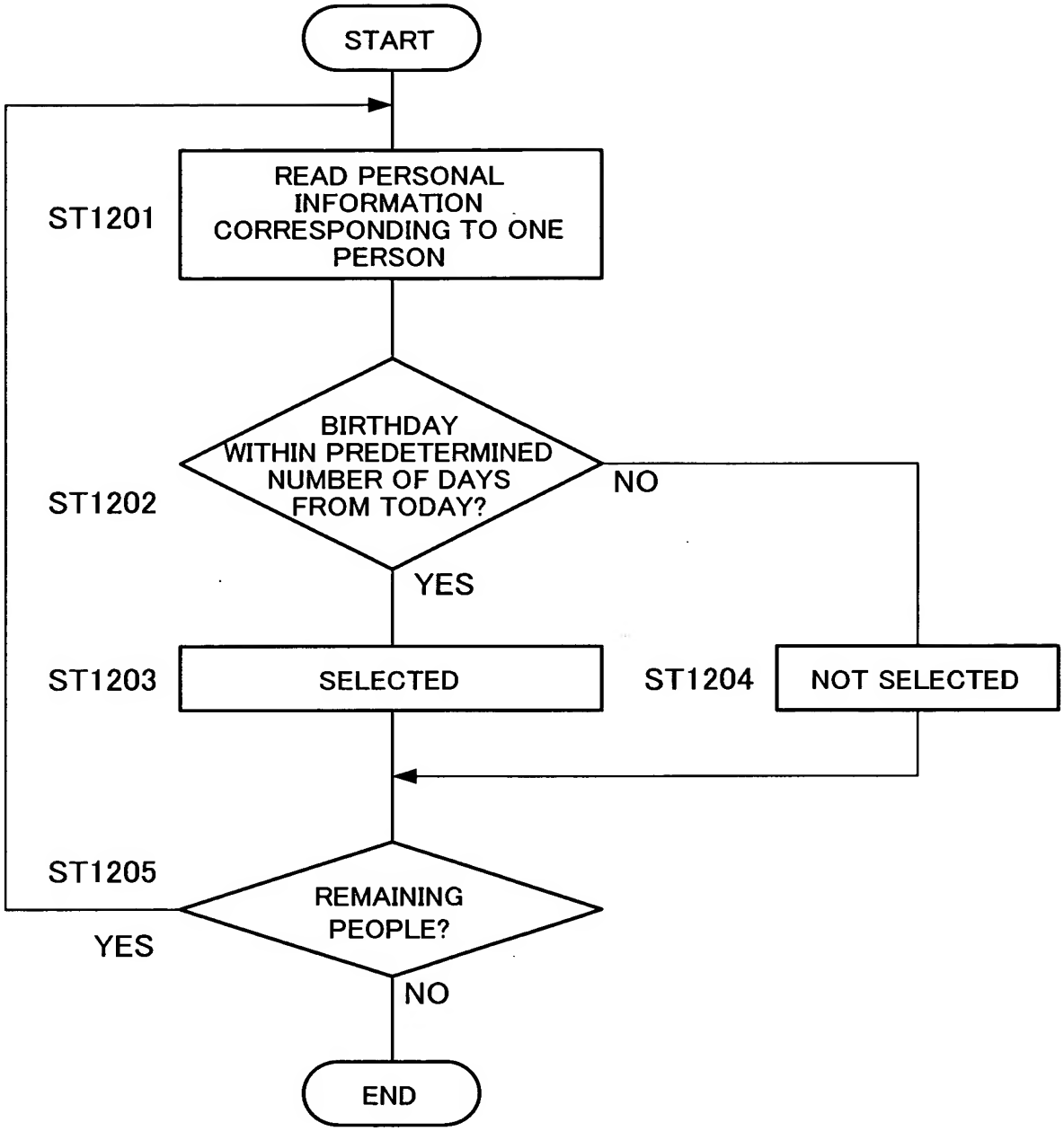

START
ST1201
READ PERSONAL INFORMATION CORRESPONDING TO ONE PERSON
ST1202
BIRTHDAY WITHIN PREDETERMINED NUMBER OF DAYS FROM TODAY?
NO
YES
ST1203
SELECTED
ST1204
NOT SELECTED
ST1205
REMAINING PEOPLE?
YES
NO
END

FIG.12

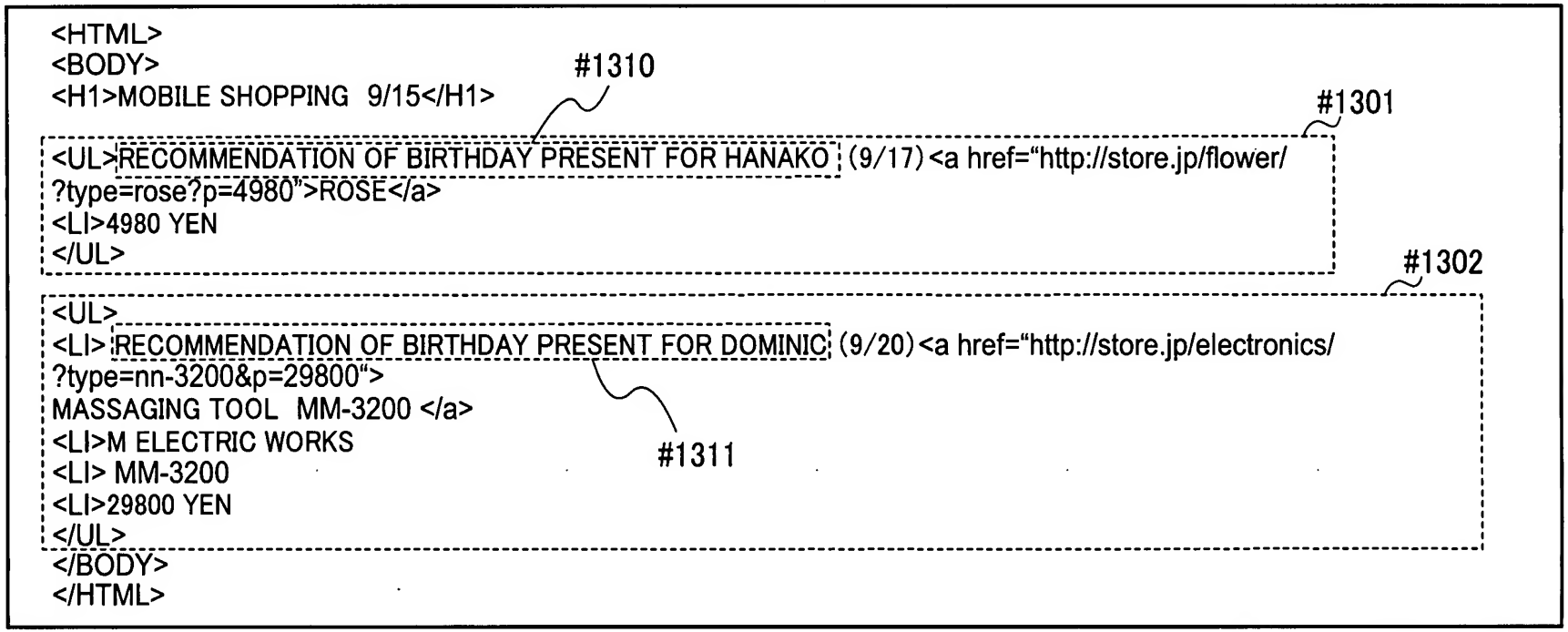

<HTML>
<BODY>
<H1>MOBILE SHOPPING 9/15</H1>
#1310
#1301
<UL>RECOMMENDATION OF BIRTHDAY PRESENT FOR HANAKO (9/17)<a href="http://store.jp/flower/
?type=rose?p=4980">ROSE
<LI>4980 YEN
</UL>
#1302
<UL>
<LI> RECOMMENDATION OF BIRTHDAY PRESENT FOR DOMINIC (9/20)<a href="http://store.jp/electronics/
?type=nn-3200&p=29800">
MASSAGING TOOL MM-3200
<LI>M ELECTRIC WORKS
#1311
<LI> MM-3200
<LI>29800 YEN
</UL>
</BODY>
</HTML>

FIG.13

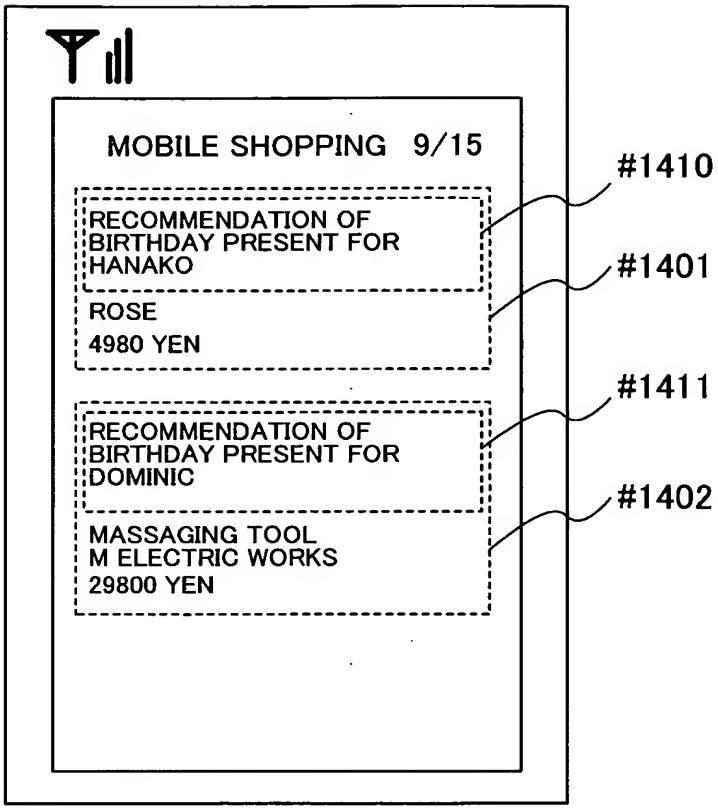

MOBILE SHOPPING 9/15
RECOMMENDATION OF BIRTHDAY PRESENT FOR HANAKO
ROSE
4980 YEN
RECOMMENDATION OF BIRTHDAY PRESENT FOR DOMINIC
MASSAGING TOOL
M ELECTRIC WORKS
29800 YEN
#1410
#1401
#1411
#1402

FIG.14

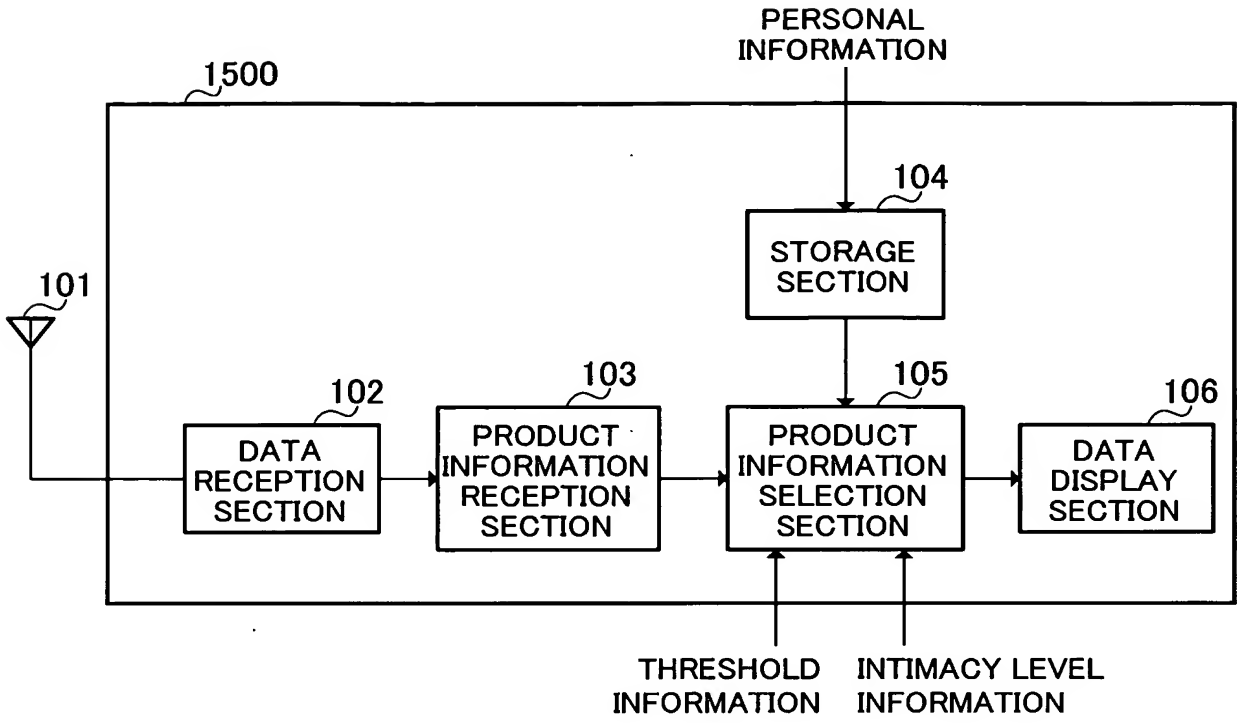

PERSONAL INFORMATION
1500
104
STORAGE SECTION
101
102
103
105
106
DATA RECEPTION SECTION
PRODUCT INFORMATION RECEPTION SECTION
PRODUCT INFORMATION SELECTION SECTION
DATA DISPLAY SECTION
THRESHOLD INFORMATION
INTIMACY LEVEL INFORMATION

FIG.15

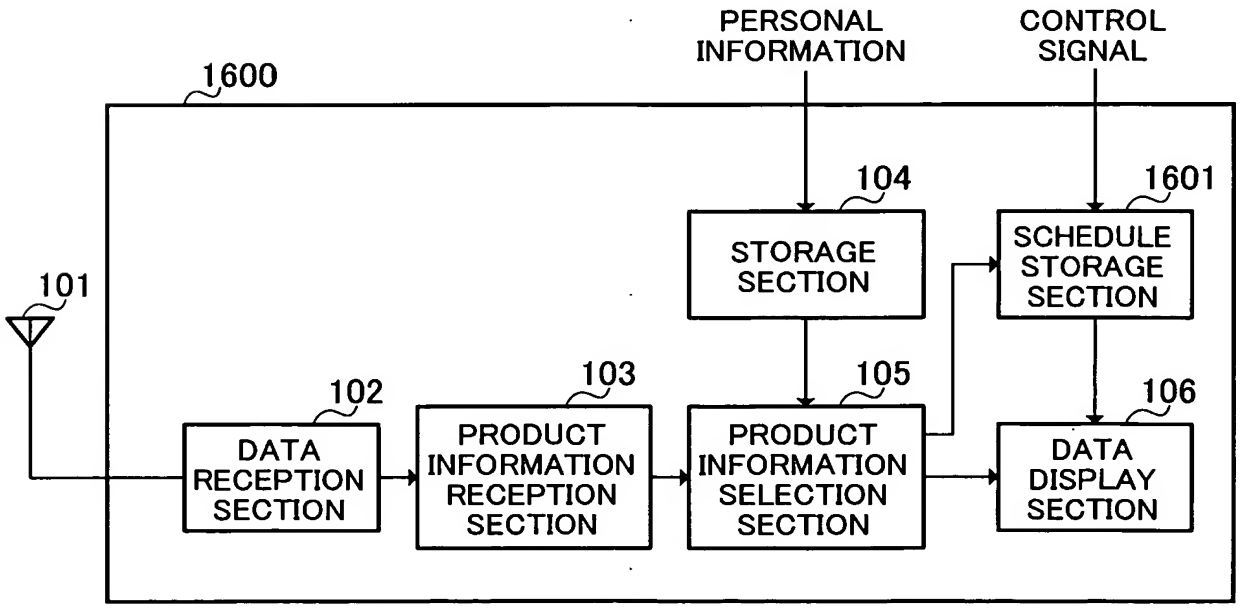

PERSONAL INFORMATION
CONTROL SIGNAL
1600
104
1601
STORAGE SECTION
SCHEDULE STORAGE SECTION
101
102
103
105
106
DATA RECEPTION SECTION
PRODUCT INFORMATION RECEPTION SECTION
PRODUCT INFORMATION SELECTION SECTION
DATA DISPLAY SECTION

FIG.16

9/10	
9/11	MEETING: OSAKA ×× BUILDING CONFERENCE ROOM 103
9/12	
9/13	TRANSFER OF HOUSE RENT
9/14	
9/15	#1702 EXPIRATION DATE FOR PURCHASING ROSE AS PRESENT FOR HANAKO
9/16	
9/17	HANAKO'S BIRTHDAY
9/18	

#1702

FIG.17

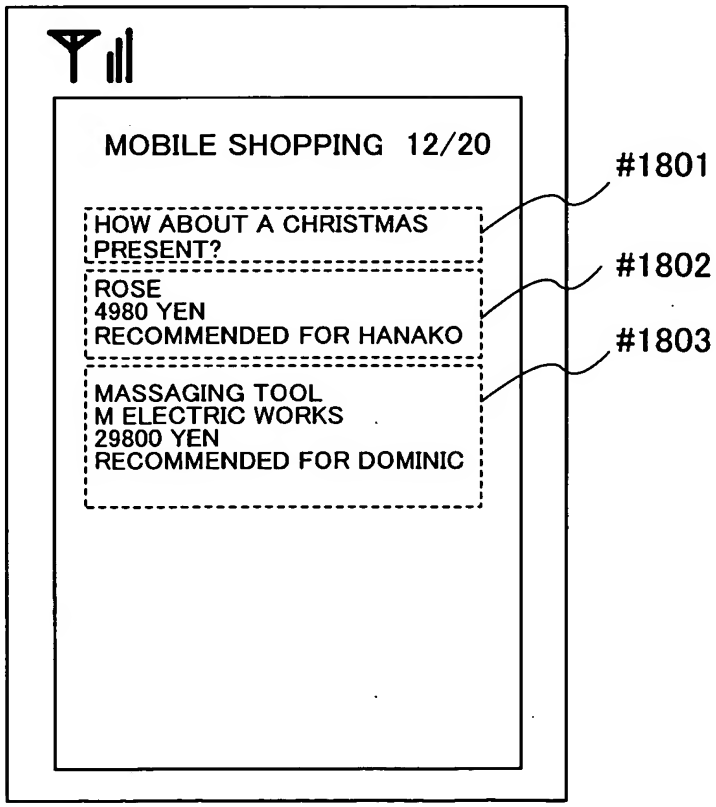


FIG.18

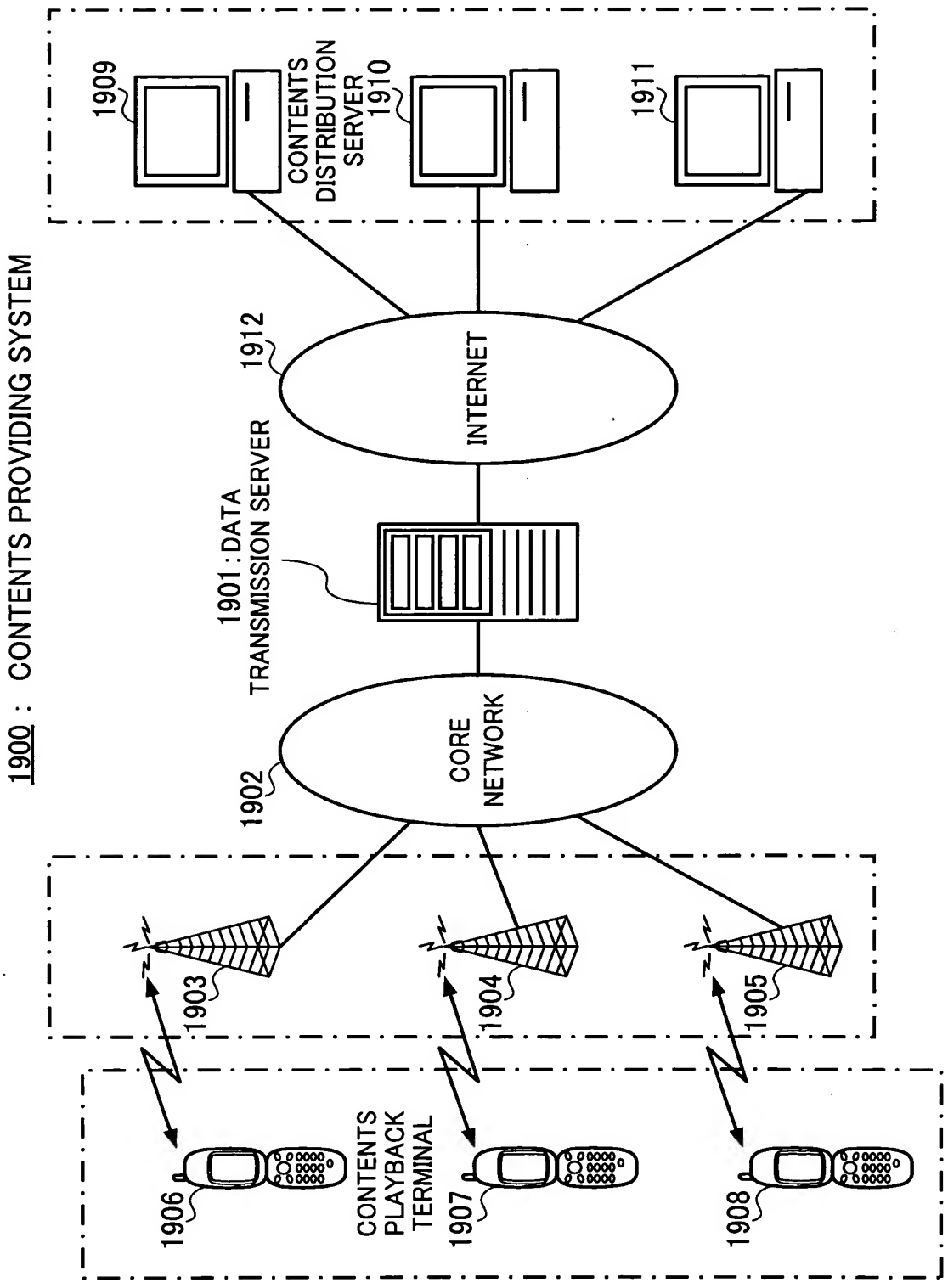

1900 : CONTENTS PROVIDING SYSTEM
1909
CONTENTS DISTRIBUTION SERVER
1910
1911
1912
INTERNET
1901 : DATA TRANSMISSION SERVER
1902
CORE NETWORK
1903
1904
1905
CONTENTS PLAYBACK TERMINAL
1906
1907
1908

FIG.19

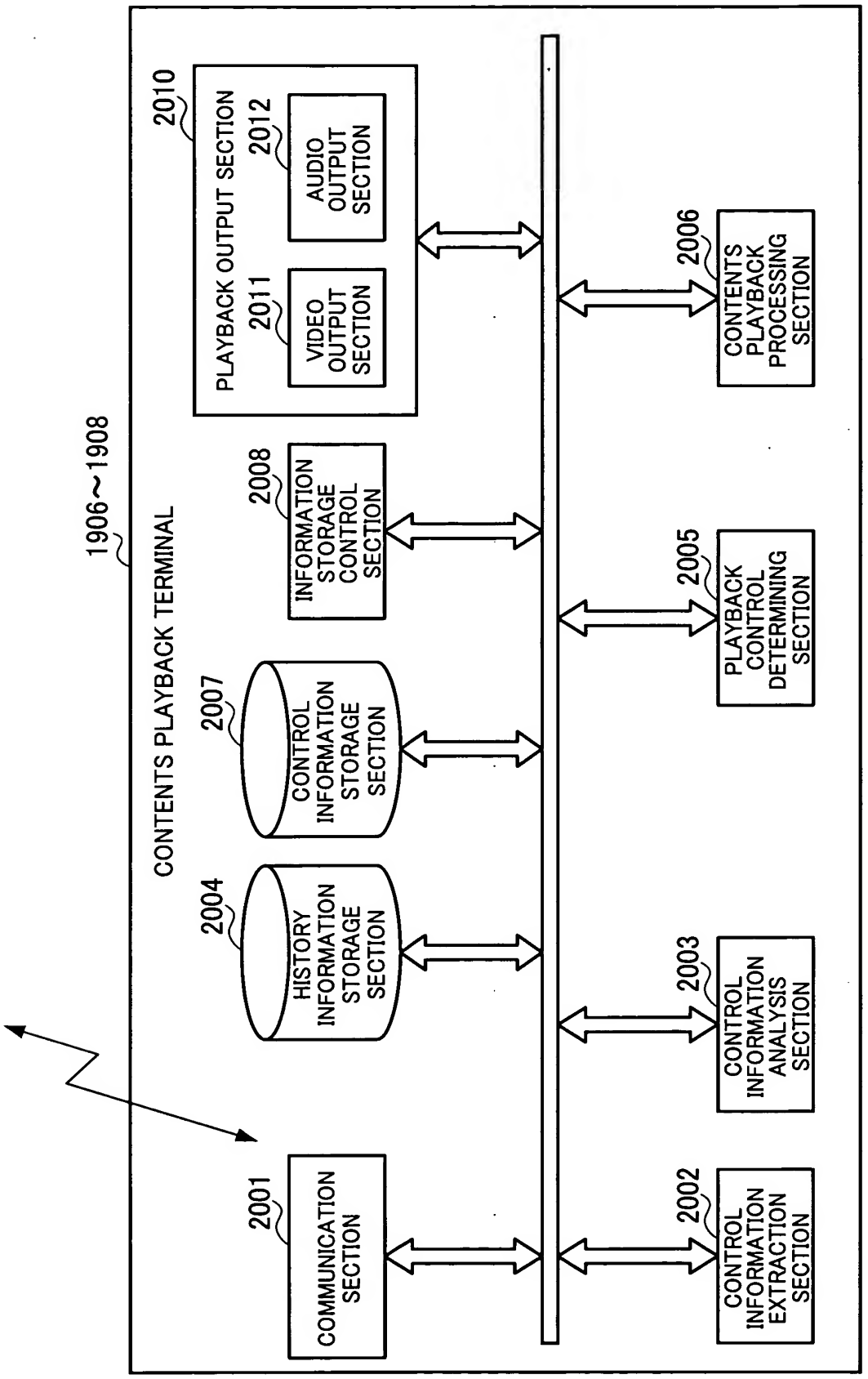

1906～1908
CONTENTS PLAYBACK TERMINAL
2001
COMMUNICATION SECTION
2002
CONTROL INFORMATION EXTRACTION SECTION
2003
CONTROL INFORMATION ANALYSIS SECTION
2004
HISTORY INFORMATION STORAGE SECTION
2005
PLAYBACK CONTROL DETERMINING SECTION
2006
CONTENTS PLAYBACK PROCESSING SECTION
2007
CONTROL INFORMATION STORAGE SECTION
2008
INFORMATION STORAGE CONTROL SECTION
2010
PLAYBACK OUTPUT SECTION
2011
VIDEO OUTPUT SECTION
2012
AUDIO OUTPUT SECTION

FIG.20

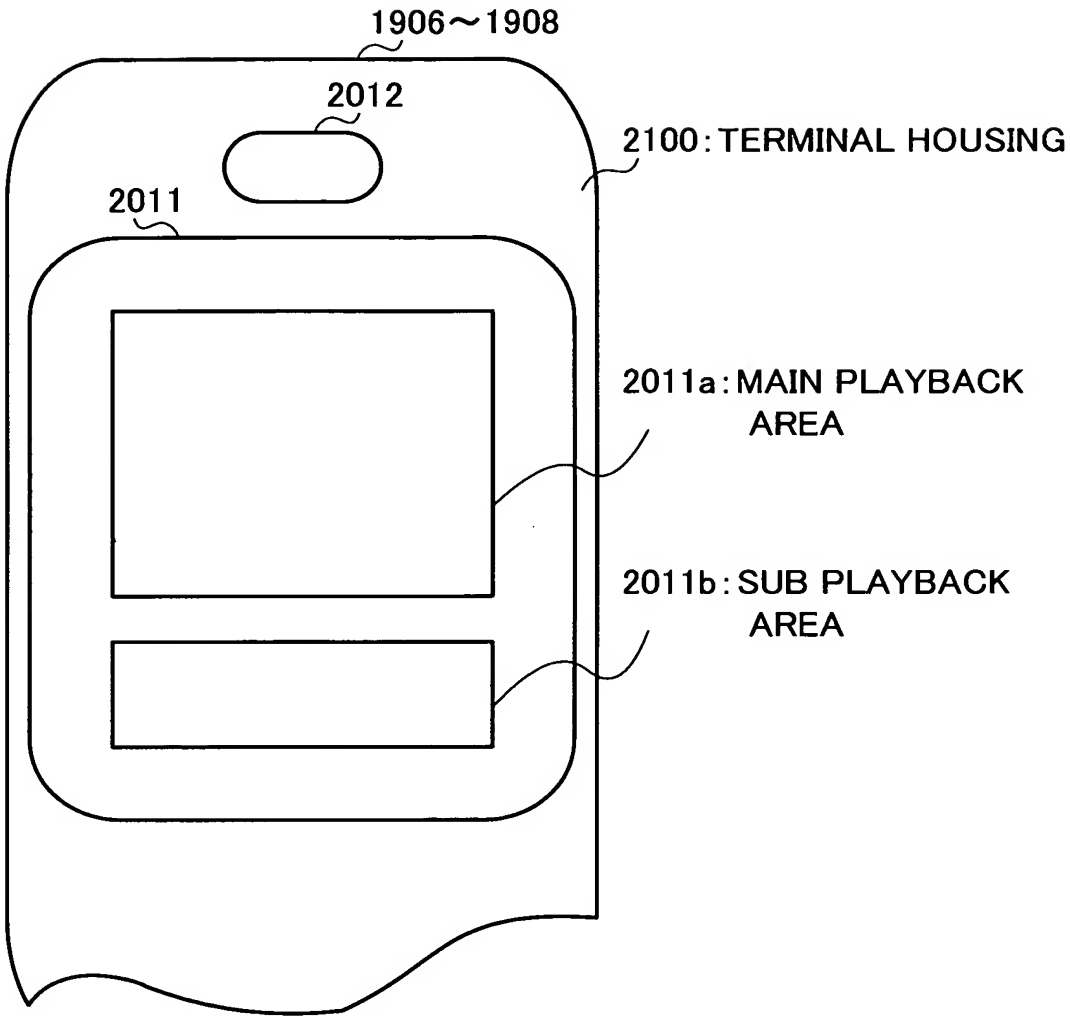

1906～1908
2012
2100:TERMINAL HOUSING
2011
2011a:MAIN PLAYBACK AREA
2011b:SUB PLAYBACK AREA

FIG.21

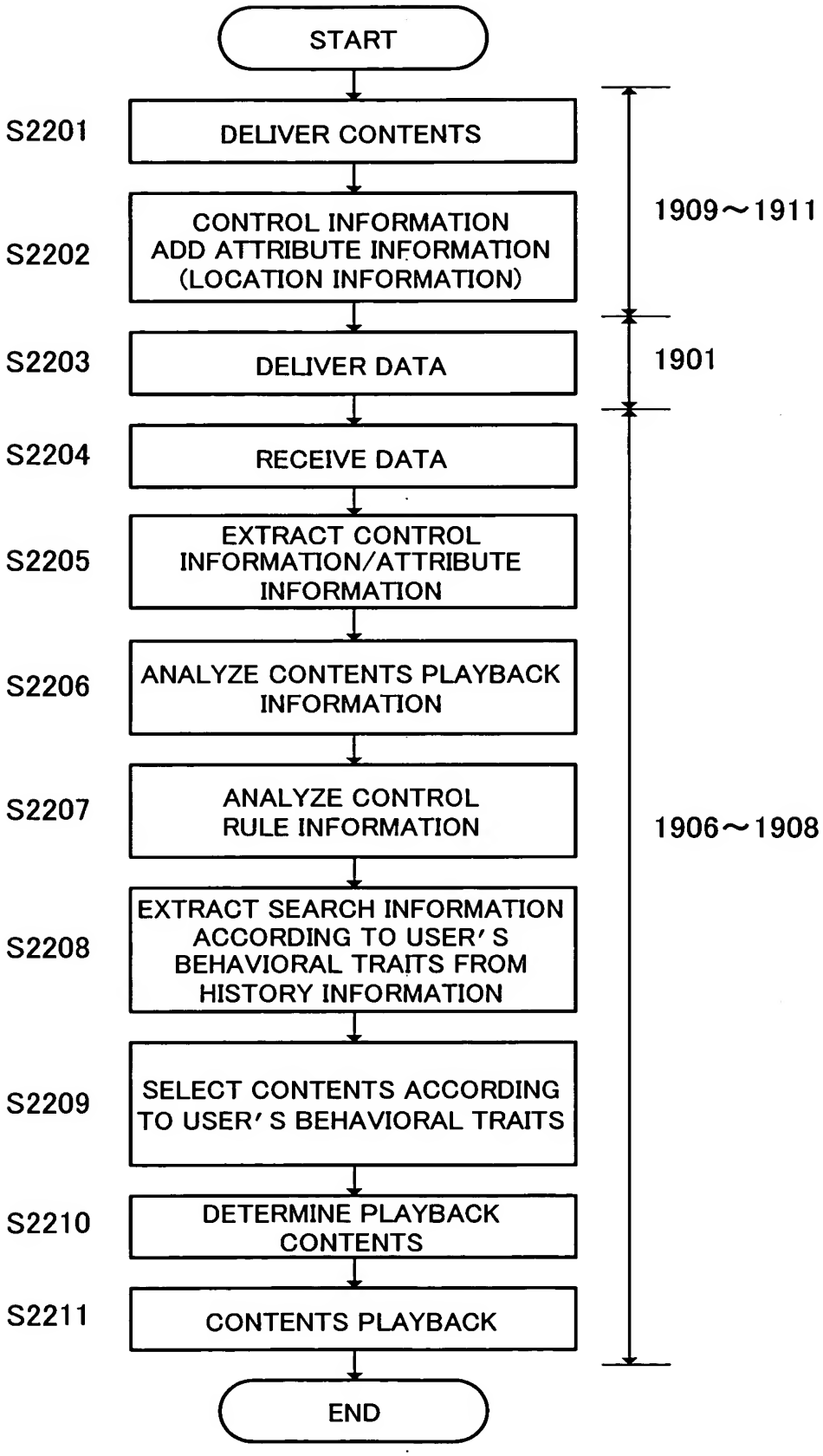

START
S2201
DELIVER CONTENTS
S2202
CONTROL INFORMATION ADD ATTRIBUTE INFORMATION (LOCATION INFORMATION)
1909～1911
S2203
DELIVER DATA
1901
S2204
RECEIVE DATA
S2205
EXTRACT CONTROL INFORMATION/ATTRIBUTE INFORMATION
S2206
ANALYZE CONTENTS PLAYBACK INFORMATION
S2207
ANALYZE CONTROL RULE INFORMATION
1906～1908
S2208
EXTRACT SEARCH INFORMATION ACCORDING TO USER'S BEHAVIORAL TRAITS FROM HISTORY INFORMATION
S2209
SELECT CONTENTS ACCORDING TO USER'S BEHAVIORAL TRAITS
S2210
DETERMINE PLAYBACK CONTENTS
S2211
CONTENTS PLAYBACK
END

FIG.22

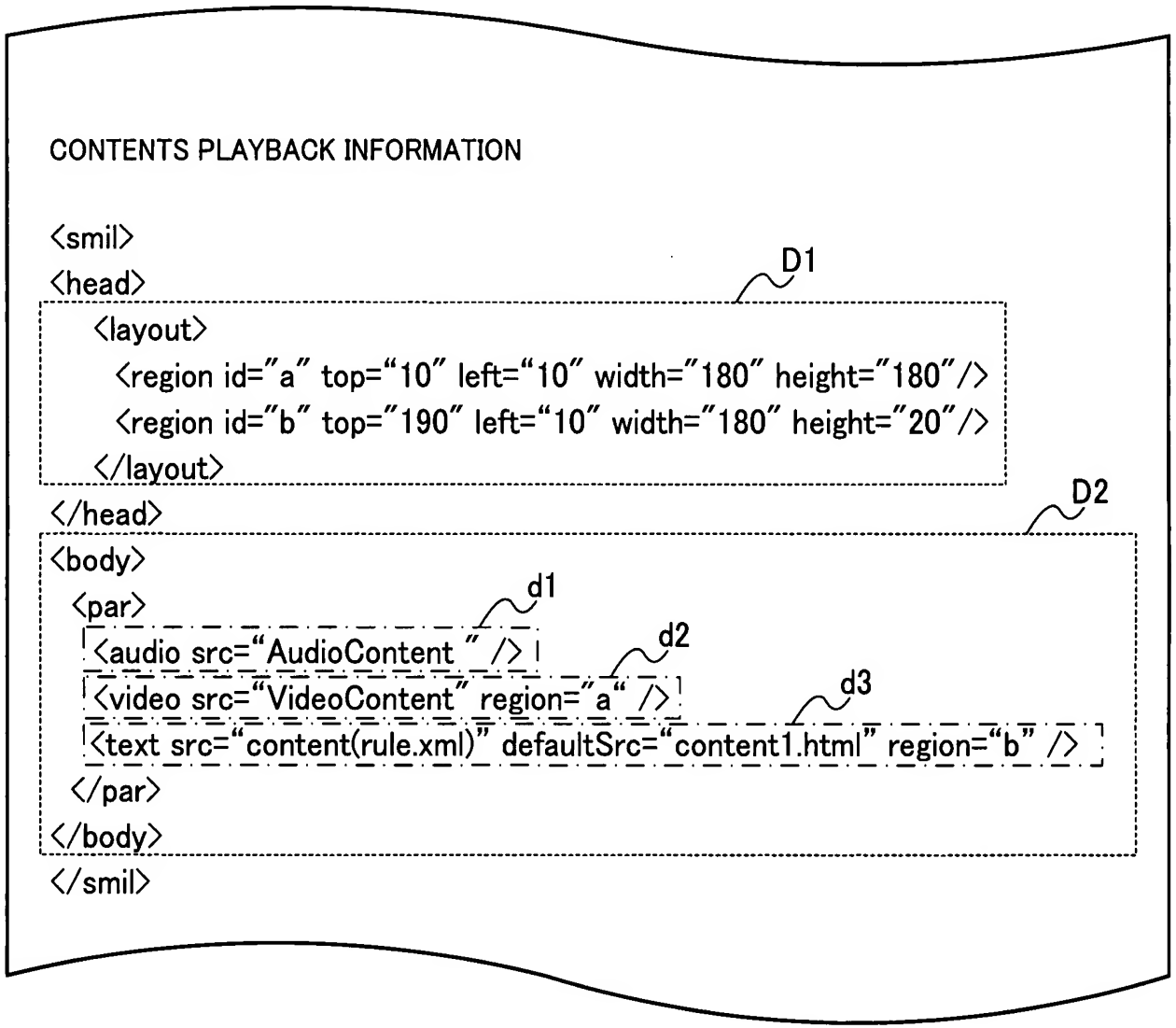

CONTENTS PLAYBACK INFORMATION
<smil>
<head>
D1
<layout>
<region id="a" top="10" left="10" width="180" height="180"/>
<region id="b" top="190" left="10" width="180" height="20"/>
</layout>
</head>
D2
<body>
<par>
d1
<audio src="AudioContent " />
d2
<video src="VideoContent" region="a" />
d3
<text src="content(rule.xml)" defaultSrc="content1.html" region="b" />
</par>
</body>
</smil>

FIG.23

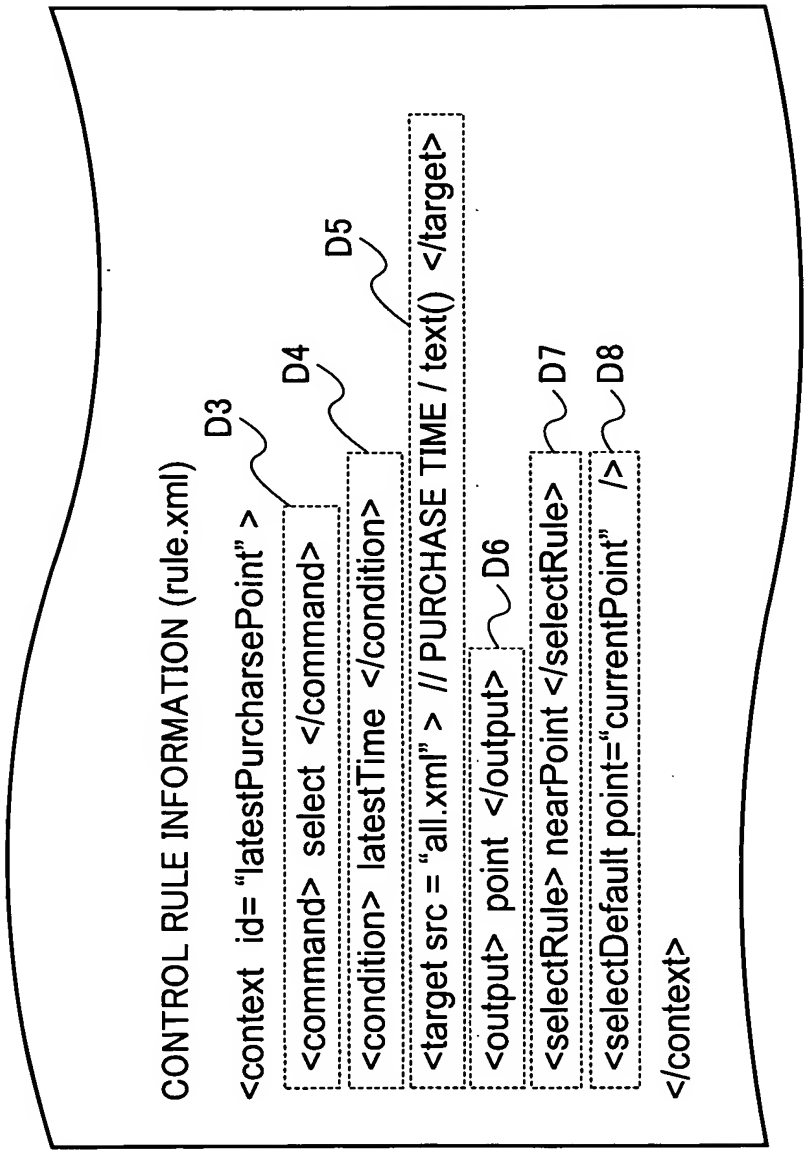

CONTROL RULE INFORMATION (rule.xml)
<context id= "latestPurcharsePoint" >
<command> select </command>
<condition> latestTime </condition>
<target src = "all.xml" > // PURCHASE TIME / text() </target>
<output> point </output>
<selectRule> nearPoint </selectRule>
<selectDefault point="currentPoint" />
</context>
D3
D4
D5
D6
D7
D8

FIG.24

PURCHASE HISTORY DB (all.xml)

```
<PURCHASE HISTORY INFORMATION  name="all.xml" >
  <item>
    <PURCHASE TIME>2003.12.03 14:00 </PURCHASE TIME>
    <DAY OF THE WEEK>  WED.  </DAY OF THE WEEK>
    <point  longitude = "139.37.28.00"
            latitude = "35.27.45.00" />
    <ITEM> COSMETICS </ITEM>
    <PRODUCT NAME>xxx</PRODUCT NAME>
    <SUM> 2,000 </SUM>
  </item>
  <item>
    <PURCHASE TIME>2003.12.05 17:00 </PURCHASE TIME>
    <DAY OF THE WEEK>  FRI.  </DAY OF THE WEEK>
    <point  longitude = "139.42.01.00"
            latitude = "35.39.34.10" />
    <ITEM> ACCESSORY </ITEM>
    <PRODUCT NAME>YYY</PRODUCT NAME>
    <SUM> 15,000 </SUM>
  </item>
  <item>
    <PURCHASE TIME>2003.12.10 14:00 </PURCHASE TIME>
    <DAY OF THE WEEK>  WED.  </DAY OF THE WEEK>
   <point  longitude = "139.37.28.00"
            latitude = "35.27.45.00" />
    <ITEM> COSMETICS </ITEM>
    <PRODUCT NAME>xxx</PRODUCT NAME>
    <SUM> 3,000 </SUM>
  </item>
```

```
<item>
    <PURCHASE TIME>2003.12.17 14:00 </PURCHASE TIME>
    <DAY OF THE WEEK>  WED.  </DAY OF THE WEEK>
    <point  longitude = "139.37.28.59"
            latitude = "35.27.45.60" />
    <ITEM> GOURMET </ITEM>
    <PRODUCT NAME>xyz</PRODUCT NAME>
    <SUM> 700 </SUM>
  </item>
  <item>
    <PURCHASE TIME>2003.12.24 14:30 </PURCHASE TIME>
    <DAY OF THE WEEK>  WED.  </DAY OF THE WEEK>
    <point  longitude = "139.37.28.00"
            latitude = "35.27.45.00" />
    <ITEM> COSMETICS </ITEM>
    <PRODUCT NAME>xxx</PRODUCT NAME>
    <SUM> 4,000 </SUM>
  </item>
</PURCHASE HISTORY INFORMATION>
```

FIG.25

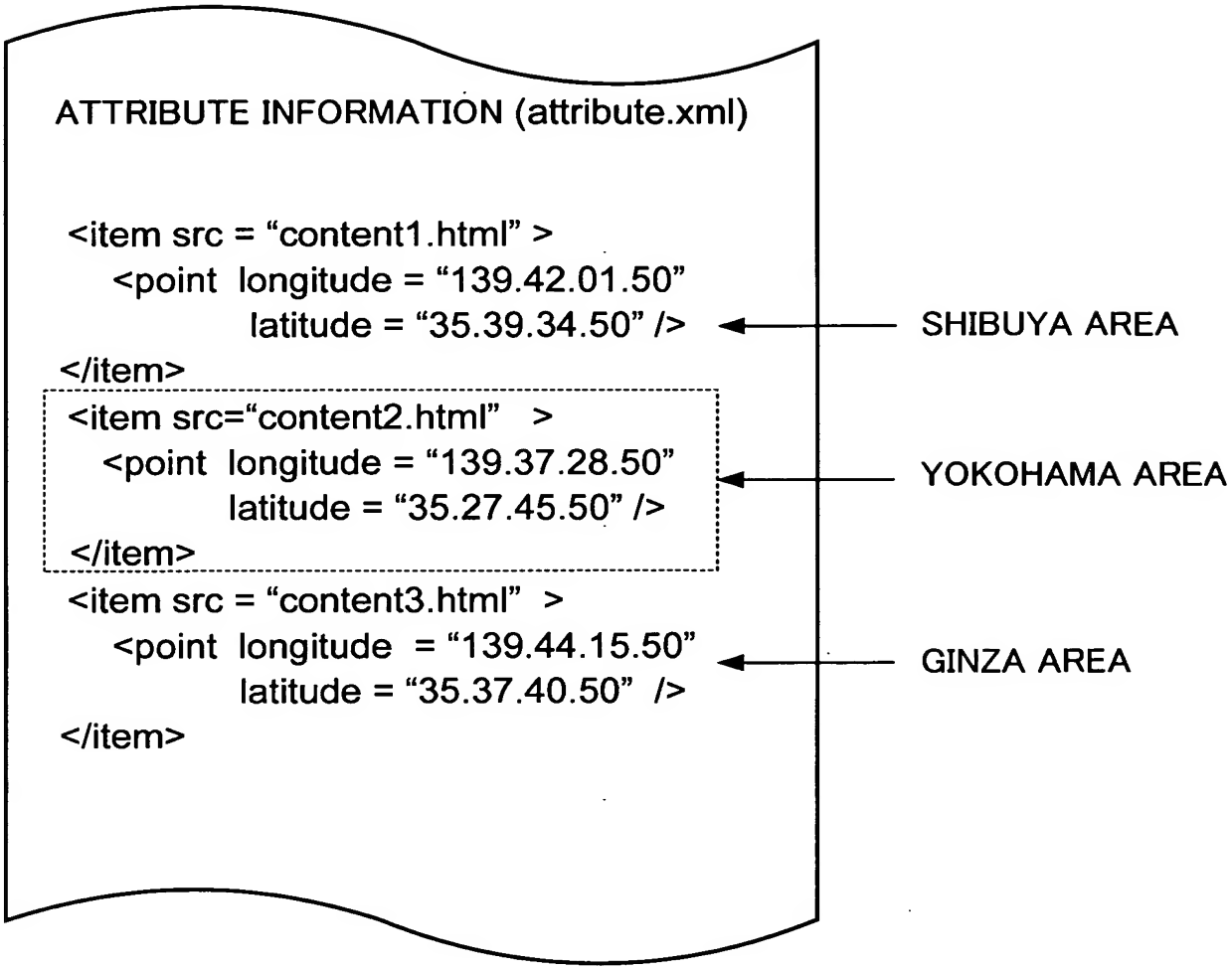
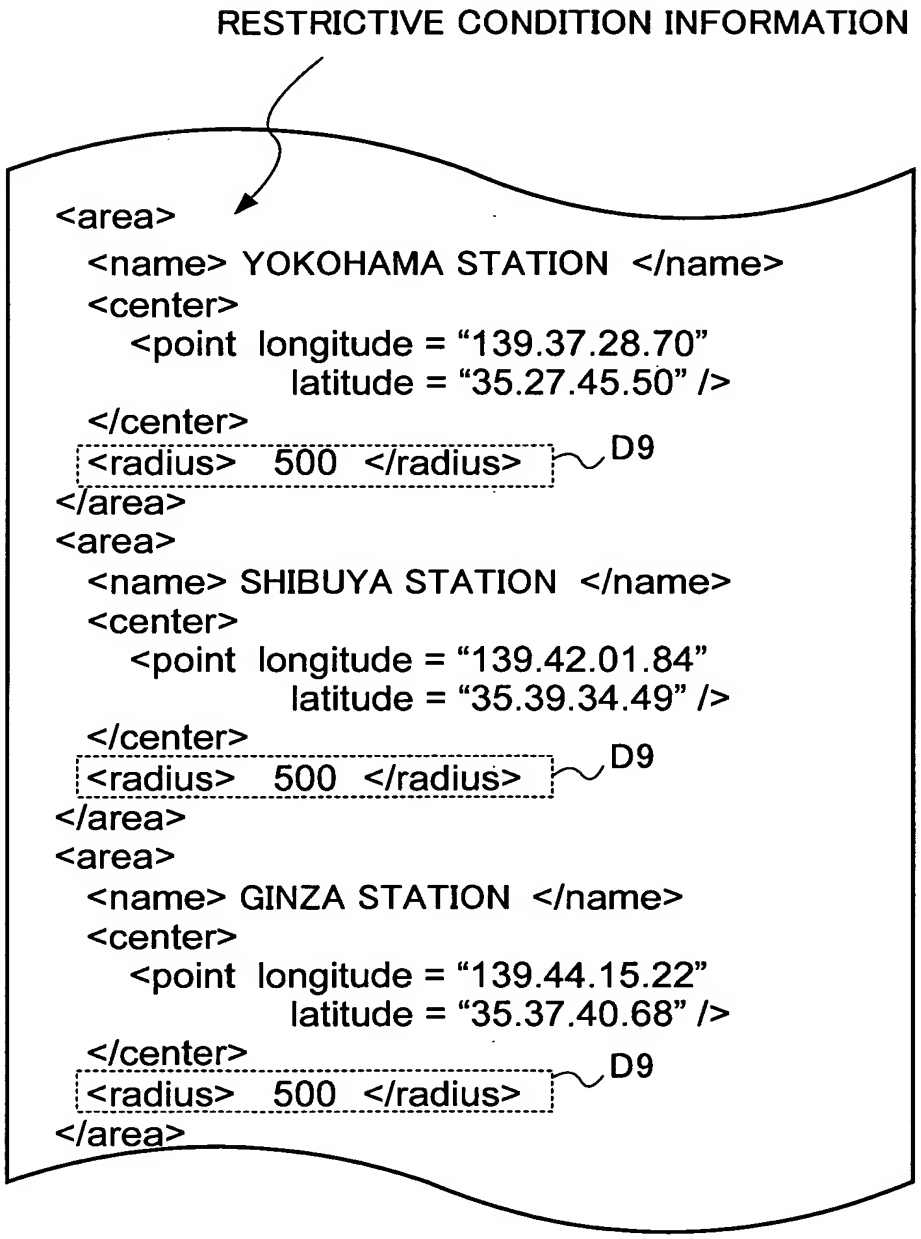

ATTRIBUTE INFORMATION (attribute.xml)
<item src = "content1.html" >
<point longitude = "139.42.01.50"
latitude = "35.39.34.50" />
</item>
<item src="content2.html" >
<point longitude = "139.37.28.50"
latitude = "35.27.45.50" />
</item>
<item src = "content3.html" >
<point longitude = "139.44.15.50"
latitude = "35.37.40.50" />
</item>
SHIBUYA AREA
YOKOHAMA AREA
GINZA AREA

FIG.26


RESTRICTIVE CONDITION INFORMATION
<area>
<name> YOKOHAMA STATION </name>

<point longitude = "139.37.28.70"
latitude = "35.27.45.50" />

<radius> 500 </radius>
D9
</area>
<area>
<name> SHIBUYA STATION </name>

<point longitude = "139.42.01.84"
latitude = "35.39.34.49" />

<radius> 500 </radius>
D9
</area>
<area>
<name> GINZA STATION </name>

<point longitude = "139.44.15.22"
latitude = "35.37.40.68" />

<radius> 500 </radius>
D9
</area>

FIG.27

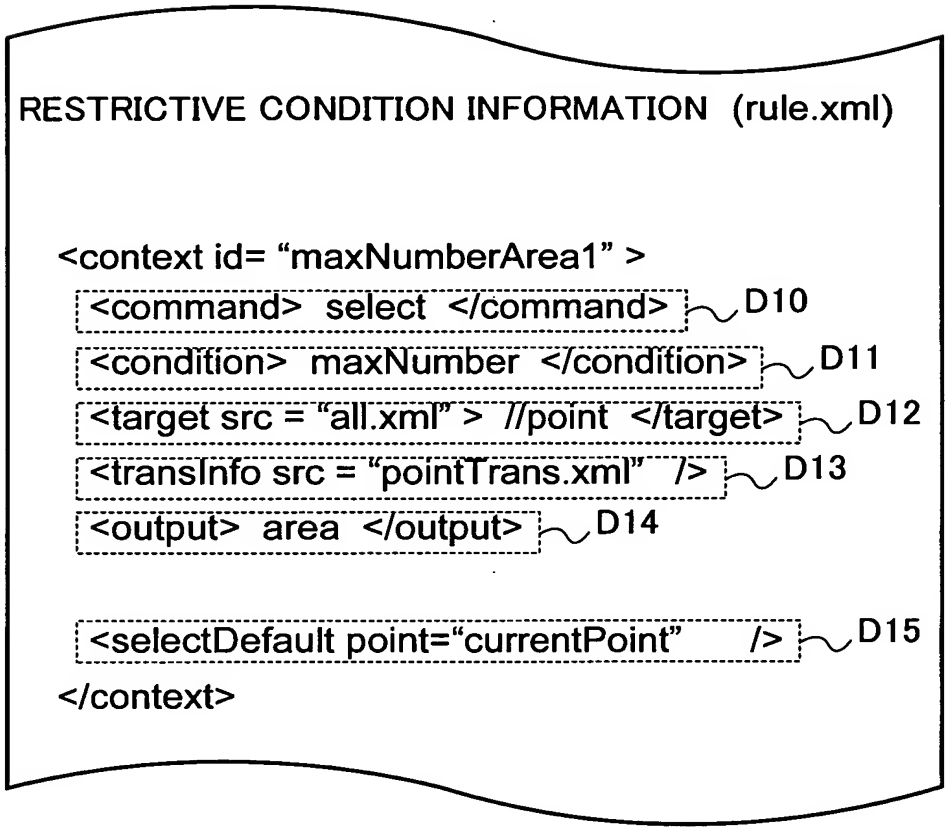

RESTRICTIVE CONDITION INFORMATION (rule.xml)
<context id= "maxNumberArea1" >
<command> select </command>
D10
<condition> maxNumber </condition>
D11
<target src = "all.xml" > //point </target>
D12
<transInfo src = "pointTrans.xml" />
D13
<output> area </output>
D14
<selectDefault point="currentPoint" />
D15
</context>

FIG.28

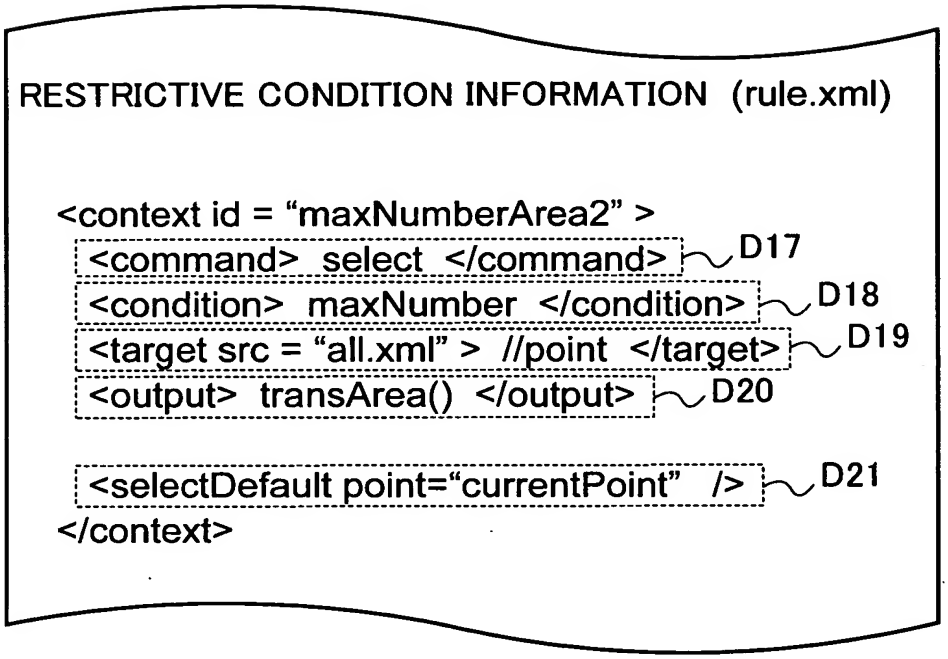

RESTRICTIVE CONDITION INFORMATION (rule.xml)
<context id = "maxNumberArea2" >
<command> select </command>
D17
<condition> maxNumber </condition>
D18
<target src = "all.xml" > //point </target>
D19
<output> transArea() </output>
D20
<selectDefault point="currentPoint" />
D21
</context>

FIG.29

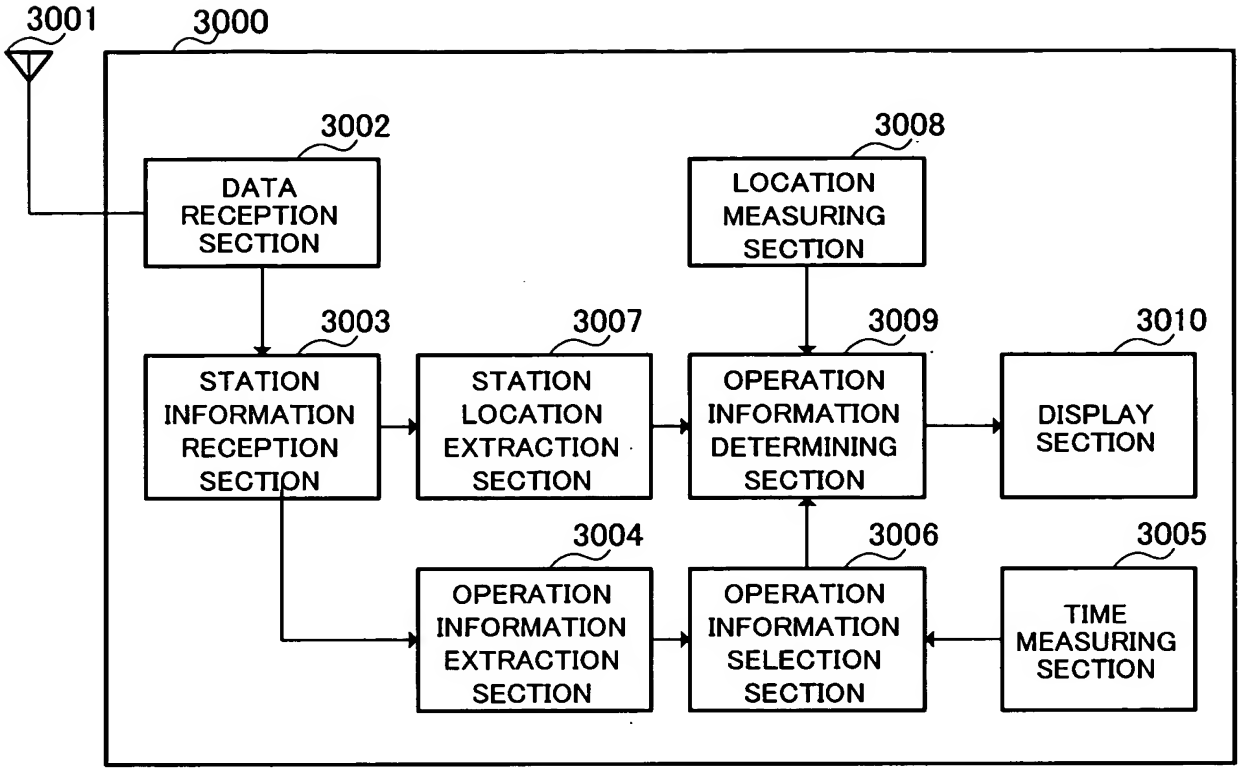

3001
3000
3002
DATA RECEPTION SECTION
3008
LOCATION MEASURING SECTION
3003
STATION INFORMATION RECEPTION SECTION
3007
STATION LOCATION EXTRACTION SECTION
3009
OPERATION INFORMATION DETERMINING SECTION
3010
DISPLAY SECTION
3004
OPERATION INFORMATION EXTRACTION SECTION
3006
OPERATION INFORMATION SELECTION SECTION
3005
TIME MEASURING SECTION

FIG.30

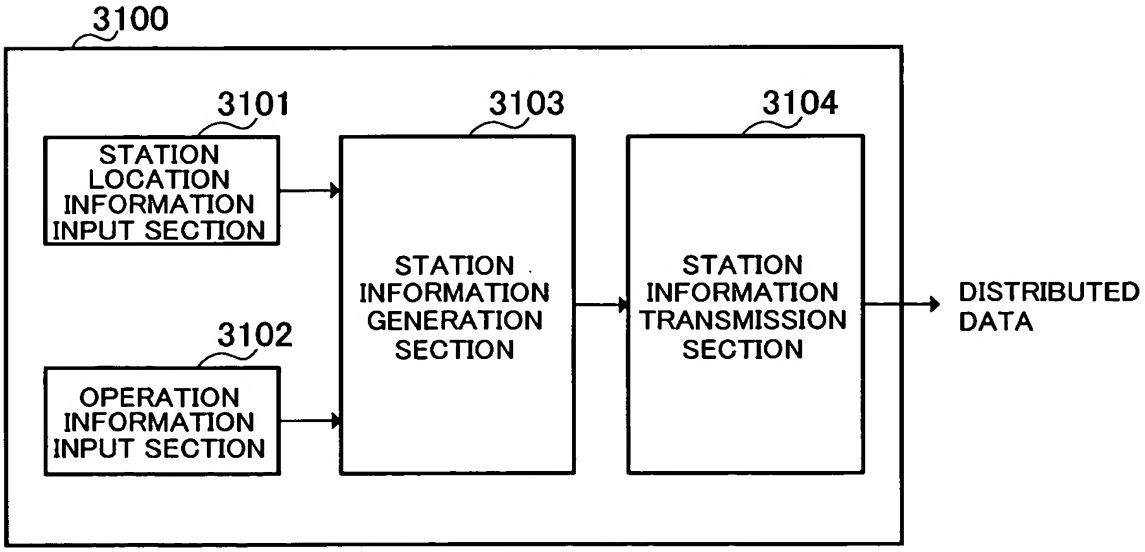

3100
3101
STATION LOCATION INFORMATION INPUT SECTION
3102
OPERATION INFORMATION INPUT SECTION
3103
STATION INFORMATION GENERATION SECTION
3104
STATION INFORMATION TRANSMISSION SECTION
DISTRIBUTED DATA

FIG.31

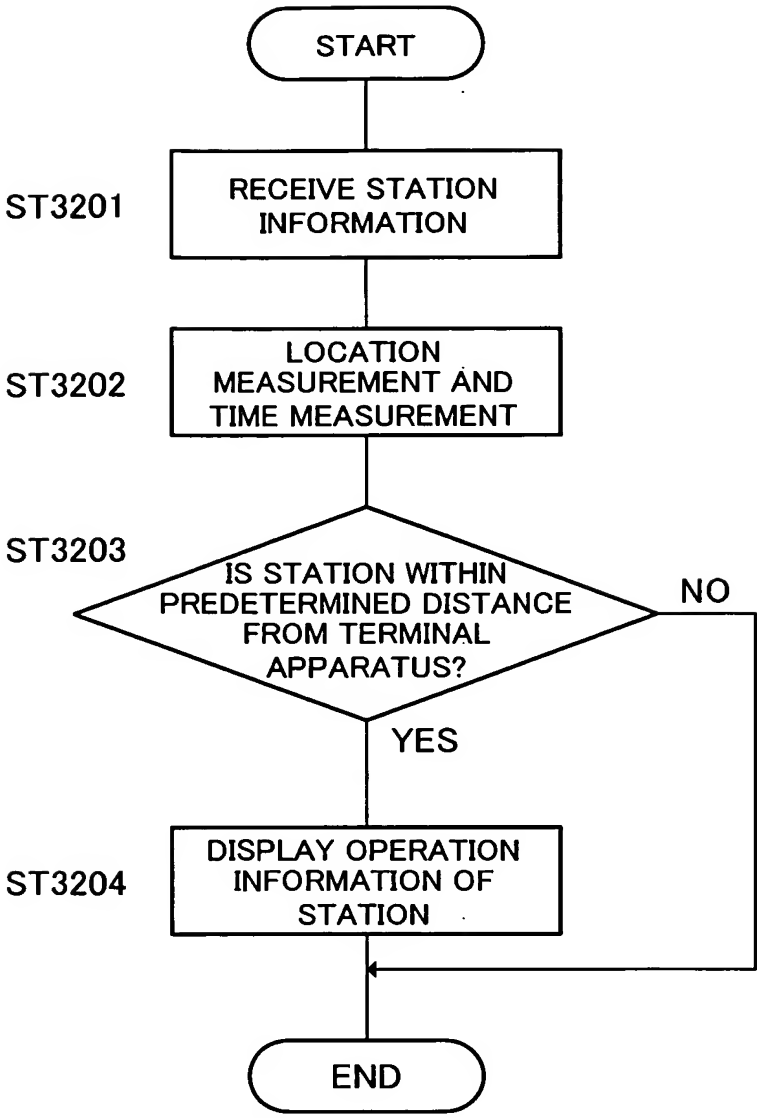

START
ST3201
RECEIVE STATION INFORMATION
ST3202
LOCATION MEASUREMENT AND TIME MEASUREMENT
ST3203
IS STATION WITHIN PREDETERMINED DISTANCE FROM TERMINAL APPARATUS?
NO
YES
ST3204
DISPLAY OPERATION INFORMATION OF STATION
END

FIG.32

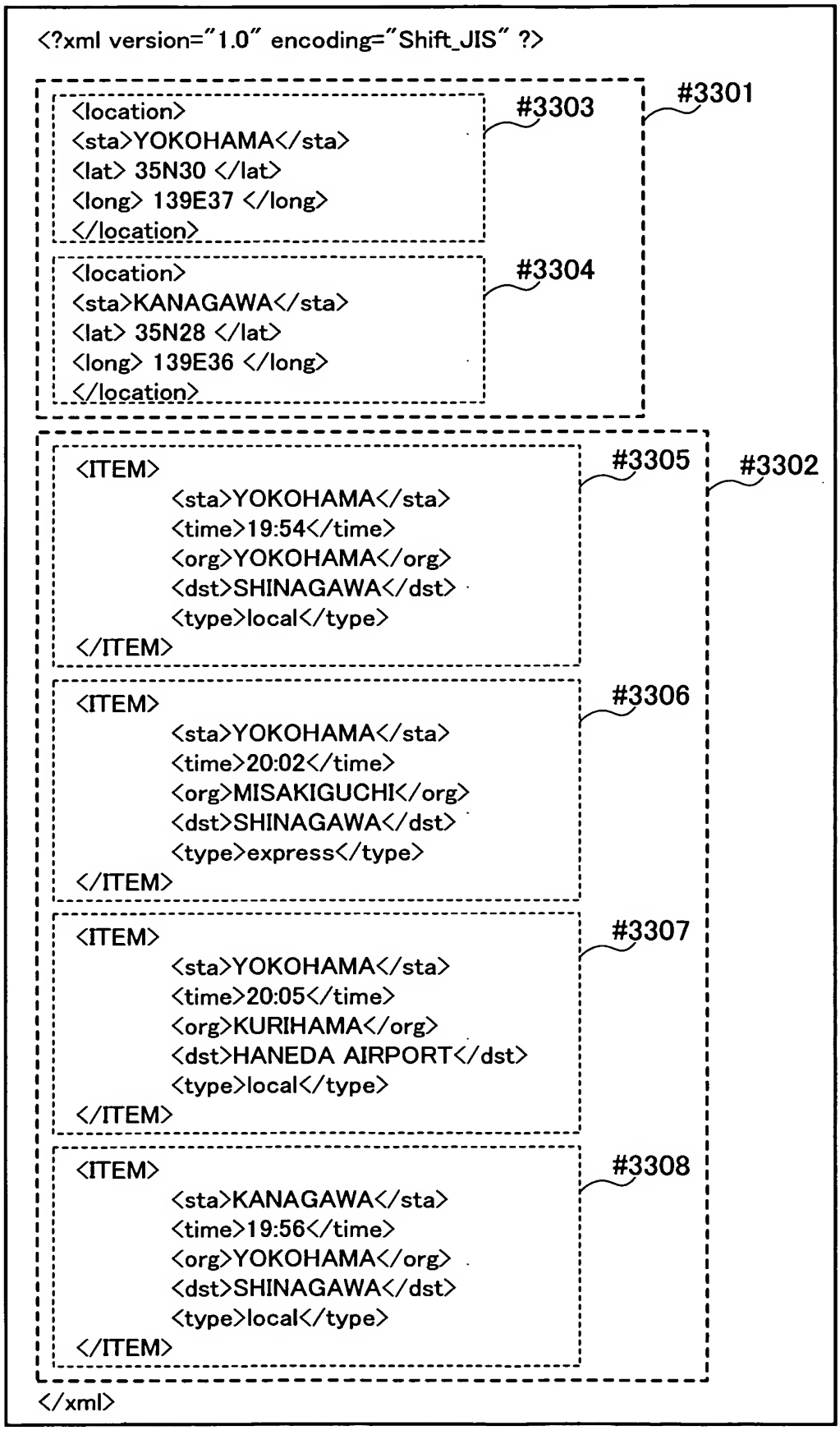

<?xml version="1.0" encoding="Shift_JIS" ?>
#3301
#3303
<location>
<sta>YOKOHAMA</sta>
<lat> 35N30 </lat>
<long> 139E37 </long>
</location>
#3304
<location>
<sta>KANAGAWA</sta>
<lat> 35N28 </lat>
<long> 139E36 </long>
</location>
#3302
#3305
<ITEM>
<sta>YOKOHAMA</sta>
<time>19:54</time>
<org>YOKOHAMA</org>
<dst>SHINAGAWA</dst>
<type>local</type>
</ITEM>
#3306
<ITEM>
<sta>YOKOHAMA</sta>
<time>20:02</time>
<org>MISAKIGUCHI</org>
<dst>SHINAGAWA</dst>
<type>express</type>
</ITEM>
#3307
<ITEM>
<sta>YOKOHAMA</sta>
<time>20:05</time>
<org>KURIHAMA</org>
<dst>HANEDA AIRPORT</dst>
<type>local</type>
</ITEM>
#3308
<ITEM>
<sta>KANAGAWA</sta>
<time>19:56</time>
<org>YOKOHAMA</org>
<dst>SHINAGAWA</dst>
<type>local</type>
</ITEM>
</xml>

FIG.33

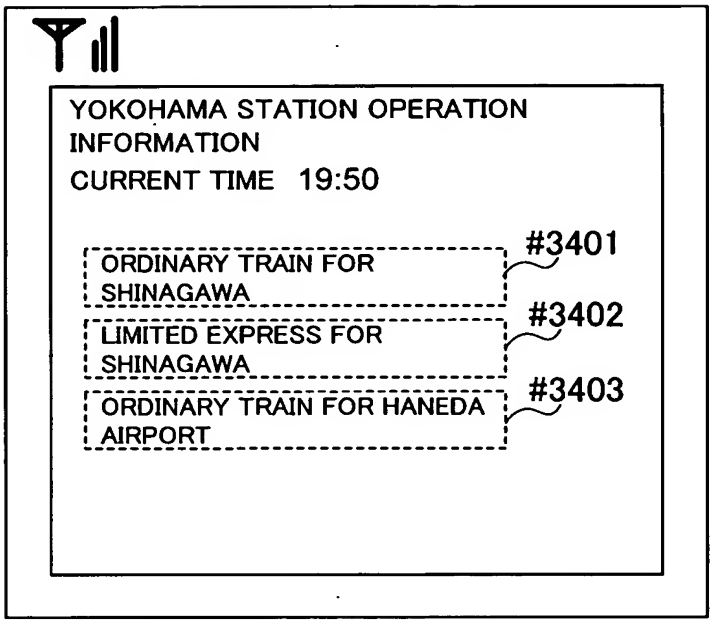

YOKOHAMA STATION OPERATION INFORMATION
CURRENT TIME 19:50
ORDINARY TRAIN FOR SHINAGAWA
#3401
LIMITED EXPRESS FOR SHINAGAWA
#3402
ORDINARY TRAIN FOR HANEDA AIRPORT
#3403

FIG.34

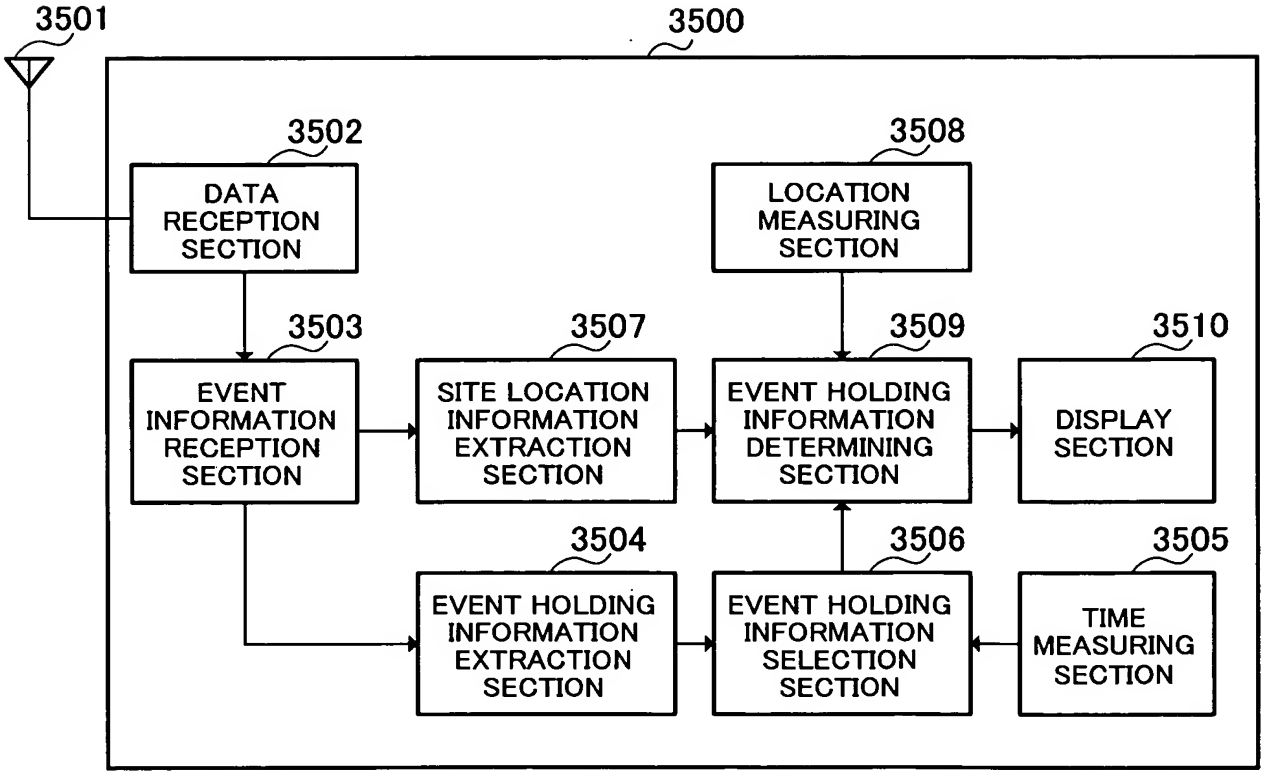

3501
3500
3502
DATA RECEPTION SECTION
3508
LOCATION MEASURING SECTION
3503
EVENT INFORMATION RECEPTION SECTION
3507
SITE LOCATION INFORMATION EXTRACTION SECTION
3509
EVENT HOLDING INFORMATION DETERMINING SECTION
3510
DISPLAY SECTION
3504
EVENT HOLDING INFORMATION EXTRACTION SECTION
3506
EVENT HOLDING INFORMATION SELECTION SECTION
3505
TIME MEASURING SECTION

FIG.35

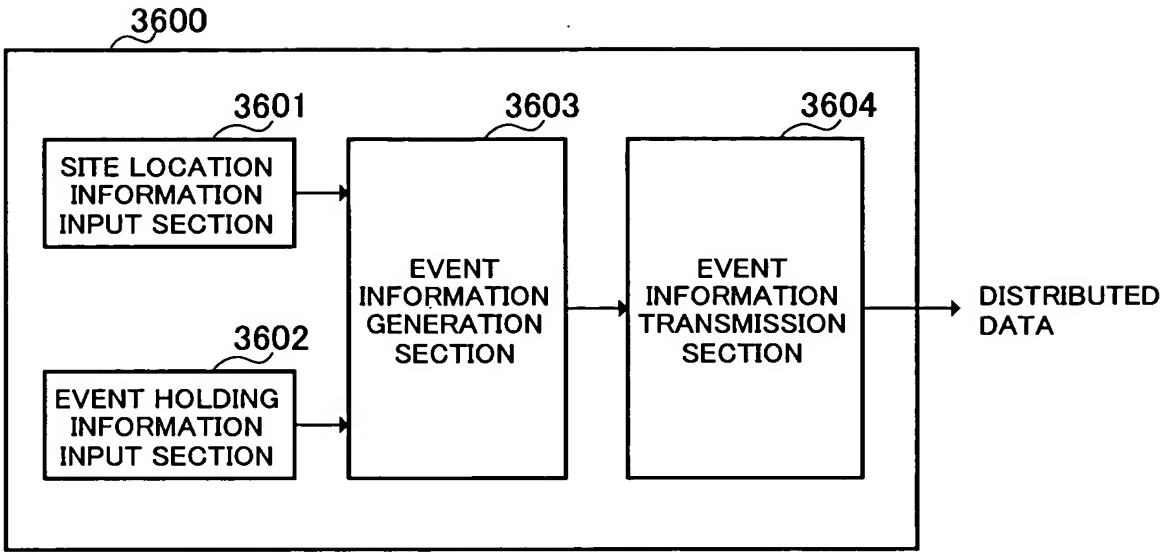

3600
3601
SITE LOCATION INFORMATION INPUT SECTION
3602
EVENT HOLDING INFORMATION INPUT SECTION
3603
EVENT INFORMATION GENERATION SECTION
3604
EVENT INFORMATION TRANSMISSION SECTION
DISTRIBUTED DATA

FIG.36

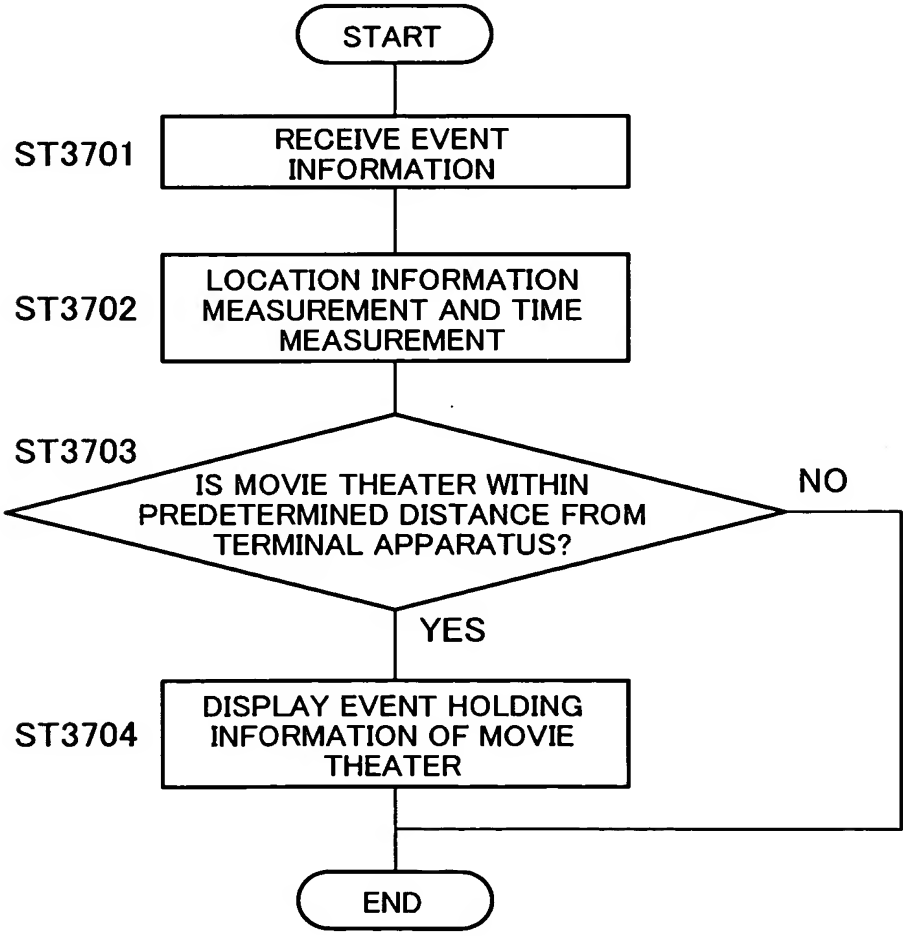

START
ST3701
RECEIVE EVENT INFORMATION
ST3702
LOCATION INFORMATION MEASUREMENT AND TIME MEASUREMENT
ST3703
IS MOVIE THEATER WITHIN PREDETERMINED DISTANCE FROM TERMINAL APPARATUS?
NO
YES
ST3704
DISPLAY EVENT HOLDING INFORMATION OF MOVIE THEATER
END

FIG.37

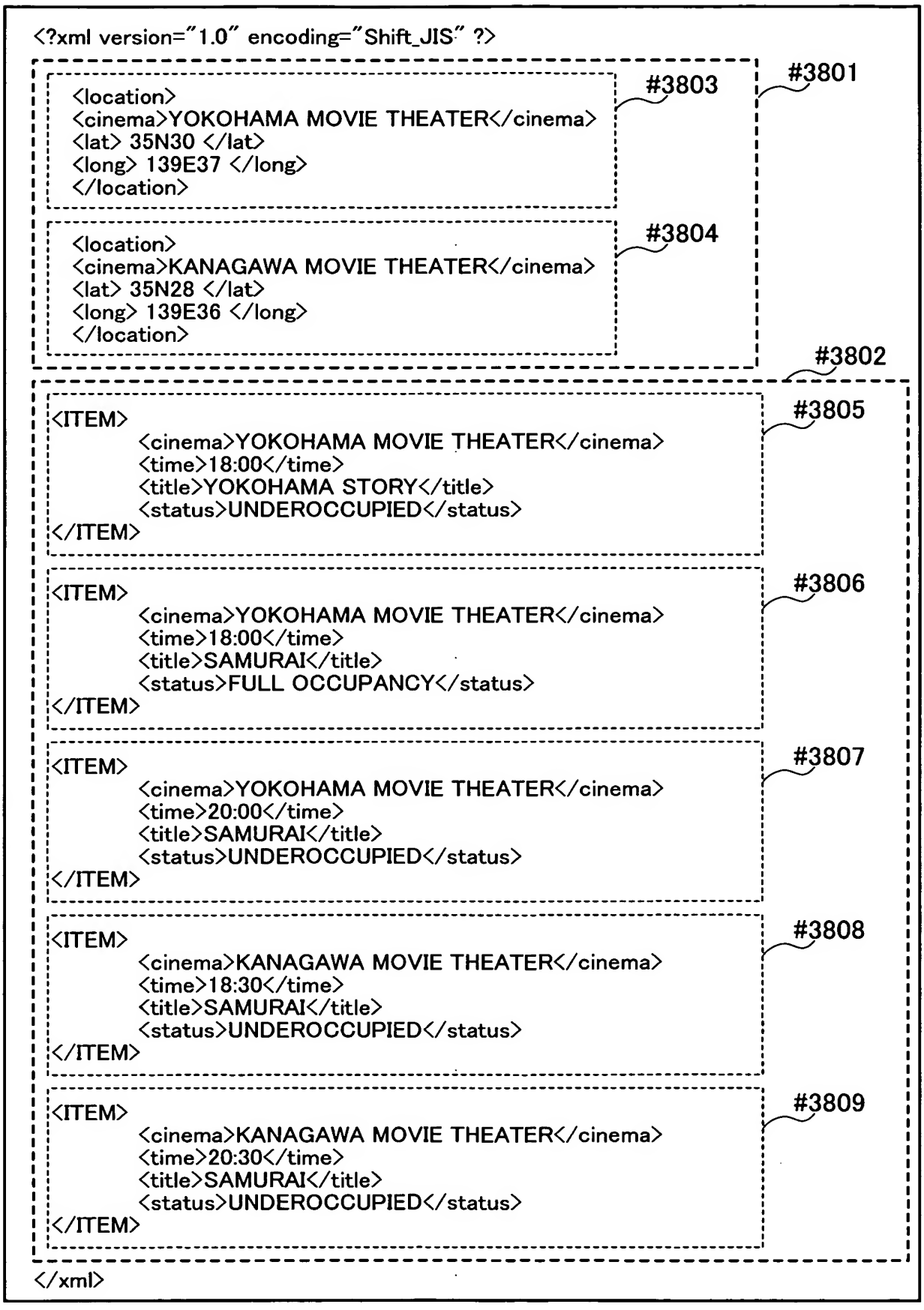

<?xml version="1.0" encoding="Shift_JIS" ?>
#3801
#3803
<location>
<cinema>YOKOHAMA MOVIE THEATER</cinema>
<lat> 35N30 </lat>
<long> 139E37 </long>
</location>
#3804
<location>
<cinema>KANAGAWA MOVIE THEATER</cinema>
<lat> 35N28 </lat>
<long> 139E36 </long>
</location>
#3802
#3805
<ITEM>
<cinema>YOKOHAMA MOVIE THEATER</cinema>
<time>18:00</time>
<title>YOKOHAMA STORY</title>
<status>UNDEROCCUPIED</status>
</ITEM>
#3806
<ITEM>
<cinema>YOKOHAMA MOVIE THEATER</cinema>
<time>18:00</time>
<title>SAMURAI</title>
<status>FULL OCCUPANCY</status>
</ITEM>
#3807
<ITEM>
<cinema>YOKOHAMA MOVIE THEATER</cinema>
<time>20:00</time>
<title>SAMURAI</title>
<status>UNDEROCCUPIED</status>
</ITEM>
#3808
<ITEM>
<cinema>KANAGAWA MOVIE THEATER</cinema>
<time>18:30</time>
<title>SAMURAI</title>
<status>UNDEROCCUPIED</status>
</ITEM>
#3809
<ITEM>
<cinema>KANAGAWA MOVIE THEATER</cinema>
<time>20:30</time>
<title>SAMURAI</title>
<status>UNDEROCCUPIED</status>
</ITEM>
</xml>

FIG.38

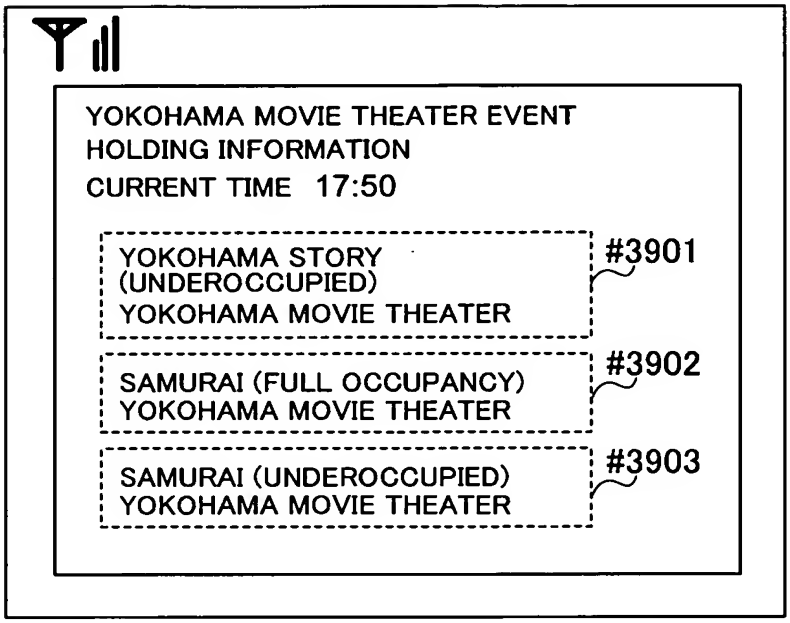

YOKOHAMA MOVIE THEATER EVENT
HOLDING INFORMATION
CURRENT TIME 17:50
YOKOHAMA STORY
(UNDEROCCUPIED)
YOKOHAMA MOVIE THEATER
#3901
SAMURAI (FULL OCCUPANCY)
YOKOHAMA MOVIE THEATER
#3902
SAMURAI (UNDEROCCUPIED)
YOKOHAMA MOVIE THEATER
#3903

FIG.39

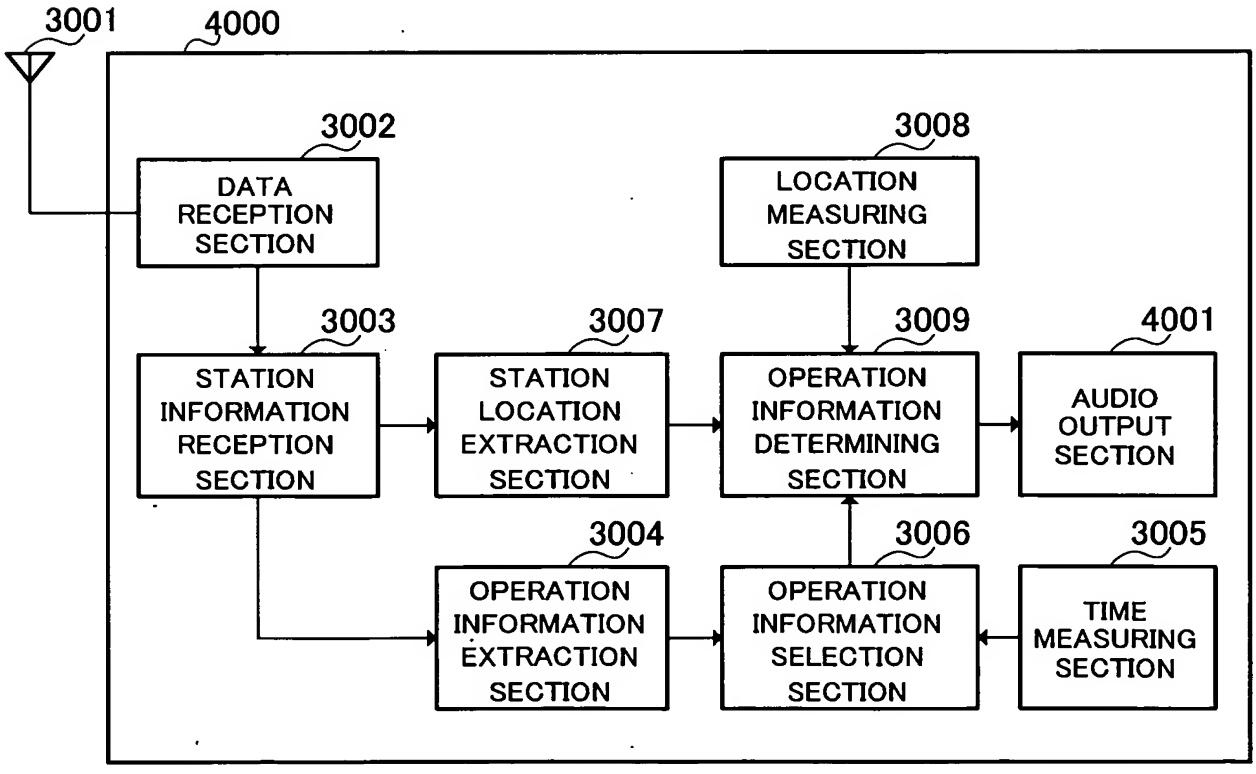

3001
4000
3002
DATA RECEPTION SECTION
3008
LOCATION MEASURING SECTION
3003
STATION INFORMATION RECEPTION SECTION
3007
STATION LOCATION EXTRACTION SECTION
3009
OPERATION INFORMATION DETERMINING SECTION
4001
AUDIO OUTPUT SECTION
3004
OPERATION INFORMATION EXTRACTION SECTION
3006
OPERATION INFORMATION SELECTION SECTION
3005
TIME MEASURING SECTION

FIG.40

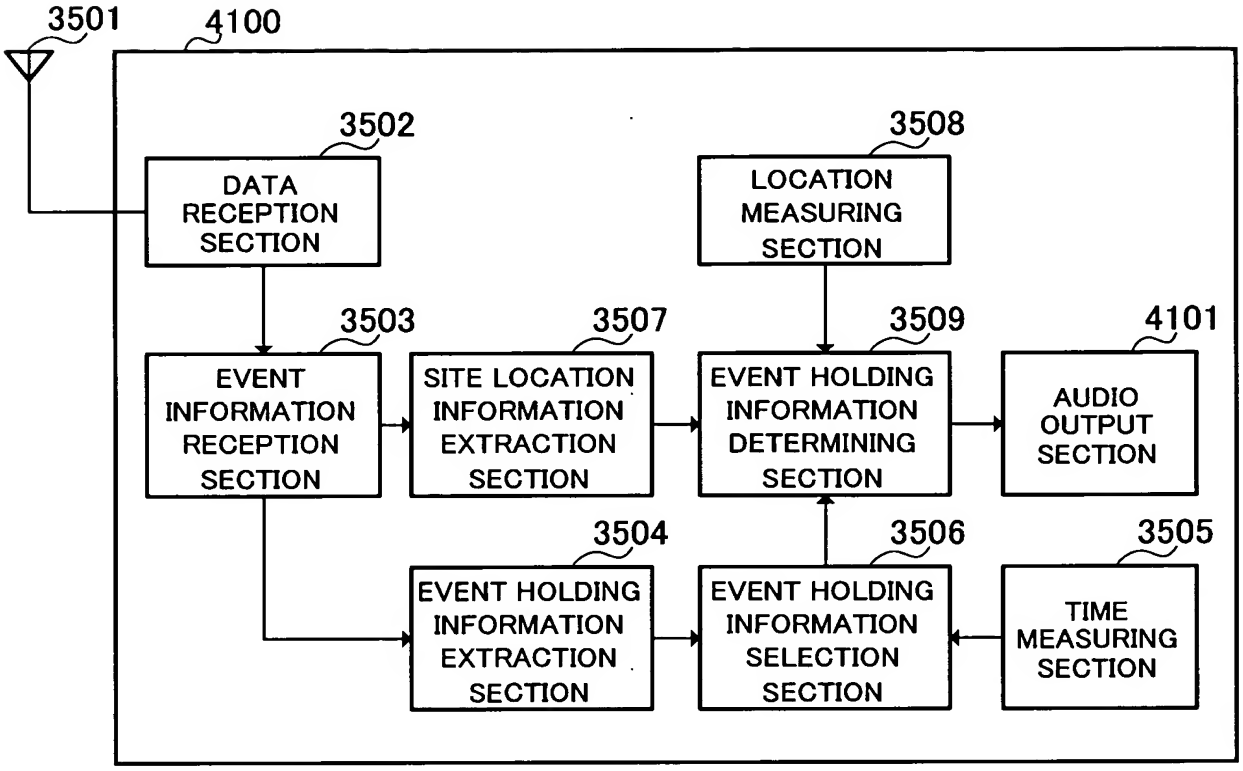

3501
4100
3502
DATA RECEPTION SECTION
3508
LOCATION MEASURING SECTION
3503
EVENT INFORMATION RECEPTION SECTION
3507
SITE LOCATION INFORMATION EXTRACTION SECTION
3509
EVENT HOLDING INFORMATION DETERMINING SECTION
4101
AUDIO OUTPUT SECTION
3504
EVENT HOLDING INFORMATION EXTRACTION SECTION
3506
EVENT HOLDING INFORMATION SELECTION SECTION
3505
TIME MEASURING SECTION

FIG.41